JUL 5 1929

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THE JOURNAL

OF THE

American Medical Association

Annual Subscription, $5.00 | PUBLISHED WEEKLY | Single Copies, 20 Cents

VOLUME 93, No. 1 | 535 North Dearborn Street, CHICAGO, ILL. | JULY 6, 1929

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Entered as Second-Class Matter, June 25, 1885, at the Postoffice at Chicago, Ill., under Act of March 3, 1879. Acceptance for mailing at special rate of postage provided for in Section 1103, Act of October 3, 1917, authorized on June 14, 1918. If undeliverable, return postage is guaranteed

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OF THE

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VOLUME 93 JULY—DECEMBER, 1929

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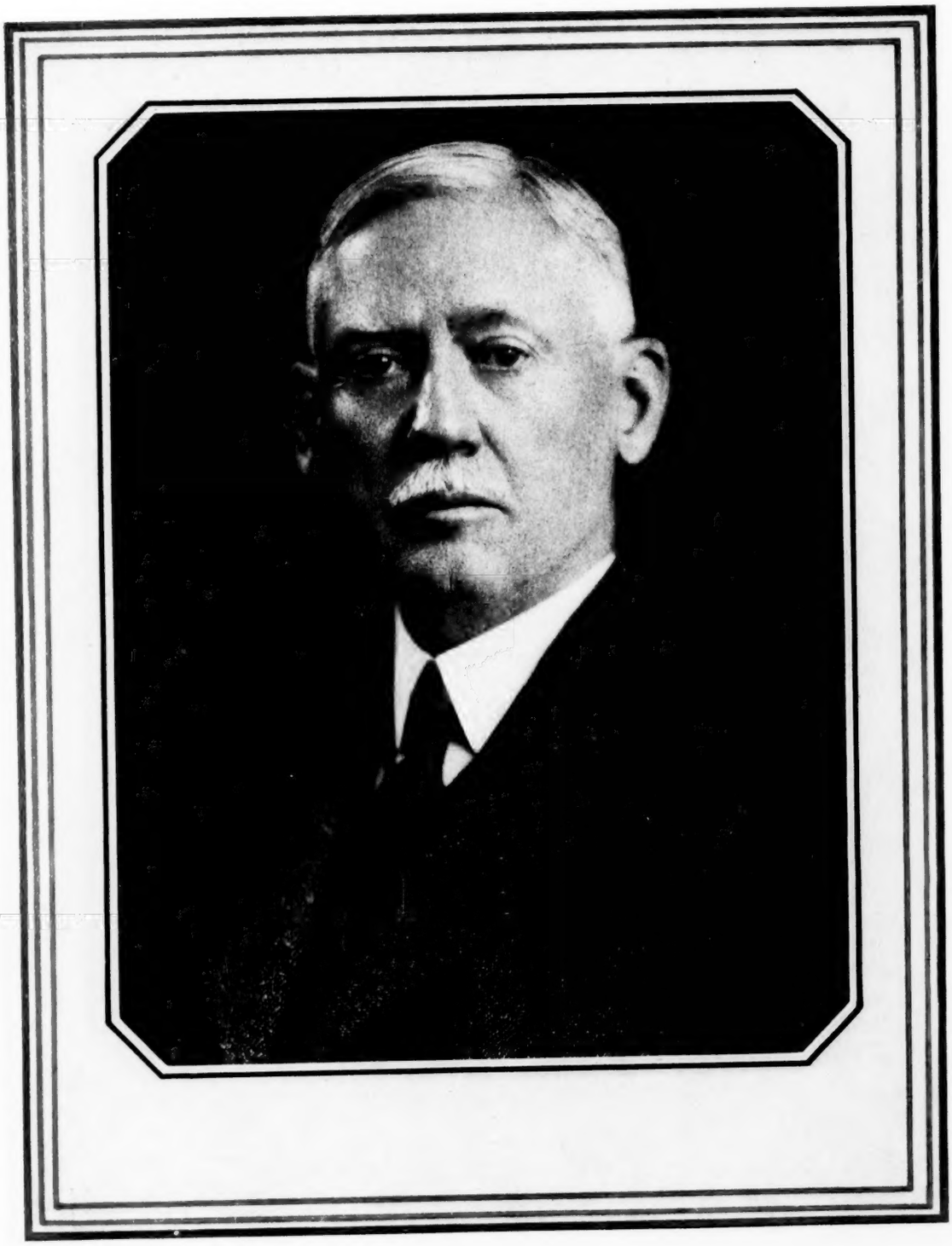

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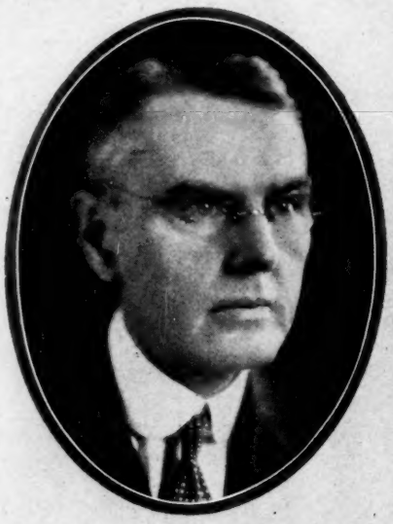

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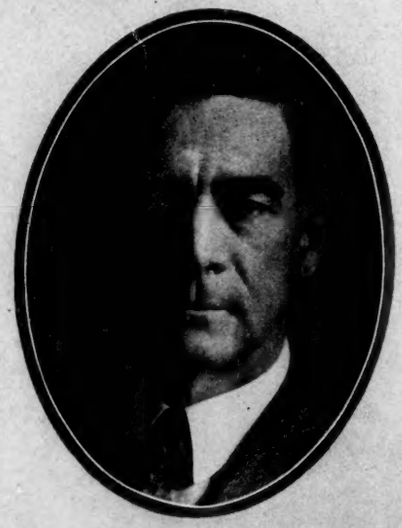

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The Journal of the
American Medical Association

Published Under the Auspices of the Board of Trustees

Vol. 93, No. 1 Chicago, Illinois July 6, 1929

REFLEX GRASPING AND GROPING

ITS SIGNIFICANCE IN CEREBRAL LOCALIZATION *

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The reflex grasping produced in the infant by introducing the finger into its palm is a phenomenon too well known to deserve description. It disappears as the child develops, probably at about the age of 1 year, although the exact time is variable. This phenomenon may appear in later life as a manifestation of disease of the brain either focal or general. In certain cases it is of definite localizing value, pointing accurately to the contralateral frontal lobe.

Only within the past year has the symptom evoked much attention or discussion, although its nature seems to have been recognized by Janischewsky [1] as much as twenty years ago. His extensive contribution last year, appearing almost simultaneously with those of Schuster,[2] and of Adie and Critchley,[3] has served to focus the attention of neurologists on what appears to be a valuable sign in cerebral localization. There is abundant evidence, however, that the phenomenon has been repeatedly encountered in the past, and even described under a variety of names. Liepmann,[4] in his work on apraxia, frequently encountered "tonic perseveration and clonic perseveration" terms that Wilson and Walshe [5] criticized, substituting therefor "tonic innervation" and "clonic innervation." Adie and Critchley find "forced grasping and groping" most expressive. It seems most clearly related to the prehensile reflex in the infant, in whom both tonic and clonic forms may be elicited, and in whom the same difficulties in the voluntary relaxation of the grasp may be observed even during the second year.

The elemental part of the symptom or sign is elicited by stroking the thenar eminence or by inserting the fingers into the palm of the patient and rubbing them back and forth, at the same time pulling outward on the flexed fingers. We believe that this simple test should be performed as a routine in the neurologic examination. When the sign is positive there is a tendency to coordinated grasping by the thumb and fingers.

The grasp is tonic, showing little variation in power over a period of several seconds. The force is usually increased when the patient attempts to let go or when the object is forcibly withdrawn from the hand. Sometimes the grasp is so strong that the patient's head and shoulders may be raised from the bed by traction on the seized object. At times the contraction becomes clonic, particularly if the grasp is avoided and the object pressed against the flexed finger tips. When the reflex is well marked, the patient himself may state that when he grasps an object he is unable to let go in spite of strenuous efforts to open the hand.

In advanced cases not only is there reflex grasping of every object that comes in contact with the palm but in addition there may be involuntary groping, so that a touch on the back of the hand or on the arm or even on the face may cause the hand to follow immediately the exciting stimulus and to take hold. Nurses are hampered in caring for such patients (e. g., case 3) on account of the tenacity of the grip on the bedclothes or on the chemise. Such patients may even have considerable difficulty in feeding themselves or in being fed because of the tendency on the part of the affected hand to grasp the food or the utensil or the hand of the nurse and pull it away from the mouth. Not infrequently, apparently without any stimulus, these patients will raise their arms and wave their hands about in the air, opening and closing the fingers, and groping; then possibly bringing their hands to the face before subsiding.

Phenomena similar to reflex grasping have been recognized in the lower extremities and even in the jaw. A light tap at the base of the infant's toes will cause them to fold over the object as the fingers do, although the reaction is only momentary. This phenomenon was elicited in cases 3, 4 and 5. Wilson and Walshe noted "tonic innervation" in the extended leg when the patient was told to flex it, and vice versa. Janischewsky publishes a striking picture of a patient with a towel grasped between the teeth; he terms this the "bulldog reflex." He noted that pressure on the teeth was necessary. We have observed tonic closure of the jaws when an attempt is made to force open the mouth.

For pathologic grasping and groping to be manifested, it seems necessary that the corticospinal tract for the hand shall be relatively intact. In two patients of Wilson and Walshe the symptoms disappeared when ordinary hemiplegia followed the removal of meningeal tumors. Other instances of disappearance of the symptom with extension of the disease and the production of total hemiplegia have been observed. Quite often, however, paralysis of the lower extremity is found

* From St. Elizabeth's Hospital and from the United States Naval Hospital, respectively.

1. Janischewsky, A.: Deutsche Ztschr. f. Nervenh. **102:** 177-195, 1928.
2. Schuster, P.: Autoptische Befunde bei Zwangsgreifen und Nachgreifen, Ztschr. f. d. ges. Neurol. u. Psychiat. **108:** 715-734, 1927.
3. Adie, W. J., and Critchley, M.: Forced Grasping and Groping, Brain **50:** 142 (June) 1927.
4. Liepmann, cited by Wilson and Walshe (footnote 5).
5. Wilson and Walshe: The Phenomenon of "Tonic Innervation" and Its Relation to Motor Apraxia, Brain **37:** 198, 1914.

associated with reflex grasping in the upper extremity on the same side.

The relation of reflex grasping to apraxia was formerly considered close, but Wilson and Walshe in 1914 pointed out that they are not the same, although they may be, and frequently are, associated. The relationship to myotonia, on the other hand, is quite distant, the two syndromes having in common only the tonic innervation.

LOCALIZATION

Reflex grasping may occur in such transient states as the epileptic aftermath, cerebral concussion or minor cerebral infarction. It may also occur in terminal conditions of unconsciousness associated with muscular rigidity. We have observed it in cases of cerebral hemorrhage, uremic coma and tuberculous meningitis, and we are inclined to believe that in most, if not all, instances of carphology, tonic and clonic grasping will be found if the adequate stimulus is applied. In such cases of unconsciousness, either transient or heralding the terminal event, reflex grasping appears to be a manifestation of partial "decerebration"; it is bilateral and it does not have any especial localizing value, merely indicating a disturbed functional condition of the brain. To be of value, consciousness must be preserved, or at least in the unconscious patient the sign must be unilateral.

It has been abundantly demonstrated that reflex grasping may result from focal lesions, and herein lies its localizing value. Of the fifteen cases followed to necropsy by Schuster, twelve showed important lesions in the frontal lobe, while in the other three the lesions were more centrally located. In two cases reported by Wilson and Walshe the meningeal tumors lay fairly close to the midline slightly anterior to the rolandic fissure. Janischewsky has frequently found this area involved, but he believes that any interruption of the frontopontile projection tract that does not also involve the corticospinal tract for the hand may cause the appearance of reflex grasping.

The same author has found this sign frequently in the various dystonias, especially in encephalitic parkinsonism. We have observed the tightening of the grasp on attempting to straighten the fingers in advanced cases of parkinsonism and other dystonias, but we are disposed to attribute it rather to the general muscular hypertonus, since the contraction is momentary and since the grasp can be relaxed by the voluntary action of the patient, even though friction of the palm is continued.

Most of our cases of bilateral reflex grasping have occurred in senile persons with cerebral arteriosclerosis, cases 3, 4 and 5 being followed to necropsy. We have observed the sign, however, in hemorrhagic pachymeningitis, in Little's disease and in a bilateral tuberculoma (case 2). Likewise in cases of unilateral grasping we attribute the sign in the majority of instances to cerebral infarction, usually in the anterior limb of the internal capsule, but we have also found it in infantile hemiplegia and in one case of glioma of the frontal lobe (case 1). In cases 3, 4 and 5 the thrombotic lesions were small, but associated with them was rather profound atrophy of the whole frontal lobe on each side, the subcortical white matter having a porous gelatinous aspect that was rather widespread and probably depended on severe reduction in the number of nerve fibers and myelin sheaths. Even the pons was affected by this reduction in the number of afferent elements, presenting a peculiar shriveled appearance.

Of all the cases reported here, that of glioma of the frontal lobe (case 1) was the most significant, since the appearance of reflex grasping allowed us to make a preoperative diagnosis of tumor of the right frontal lobe.

REPORT OF CASES

CASE 1.—*Glioma of the right frontal lobe. Reflex grasping with left hand. Exploratory operation followed by death. Necropsy.*

Fig. 1 (case 1).—Glioma of right frontal lobe. In this case there was forced grasping on the left side.

B., a man, aged 39, a private in the Marine Corps, was admitted to the U. S. Naval Hospital, Feb. 6, 1928, because of headache, vomiting and convulsions. The illness began on January 12 with a nocturnal convulsion noted by his wife. Breathing was stertorous and the left arm was extended straight from the shoulder for about ten minutes, later becoming affected with a coarse tremor lasting twenty minutes. The patient did not have any knowledge of the convulsion after regaining consciousness but manifested weakness in the left leg and in both arms the following morning. Headache began immediately following this episode and progressed rapidly to great severity.

January 24, he drove his car over an embankment, possibly during a petit mal attack, although he said that he did not lose consciousness at any time. The headache increased, somnolence developed, and projectile vomiting occurred.

Examination on admission to the hospital disclosed marked clouding of consciousness, and lethargy. The patient was oriented, did not express any hallucinations or delusions, and showed good intelligence. In standing with his eyes closed he fell backward and to the left. Power was slightly less in the left hand. The cranial nerves were normal and the pupils equal, reacting rather sluggishly to light; the eyegrounds did not present choked disk or retinitis. The tendon reflexes were normal, the cremasteric reflexes weak, and the abdominal reflexes absent on both sides. There were no sensory disturbances. The spinal fluid Kahn reaction was negative, the cell count 6 per cubic millimeter; there was a slight trace of globulin, and the colloidal gold curve was negative. The roentgenogram of the skull was negative.

During the week following admission the left arm and leg became useless and characteristic reflex grasping developed in the left hand. Whenever an object was brought into the palm it was tightly grasped and the patient was unable to let go of it even though he attempted to do so. Observation of the extensor tendons left no doubt of the voluntary efforts of the patient to release the object; yet it was many seconds before

the grip relaxed. It was increased by attempts to withdraw the object but could be abolished by asking the patient to perform some common act with his right hand; in other words, by distracting his attention. At times, when the object was caught merely by the flexed finger tips, the reflex became clonic in type, although there was no wrist clonus or marked exaggeration of tendon reflexes. As a rule the left arm of the patient rested at his side and he seemed to make no effort to move it. In sitting up the arm hung at his side neglected. Yet in voluntary movements it was not greatly inferior to the opposite limb in muscular power, although fine movements were practically abolished by the marked tendency toward tonic innervation. The tendon reflexes were somewhat increased in the left arm, Mayer's sign was exaggerated, and Hoffman's sign was slightly positive. There was no thumb sign. The sense of position was normal in the fingers. Tests for apraxia were unsatisfactory owing to the obnubilation of the patient and the poor coordination of the left hand. He was able to perform acts of buttoning, writing, and striking a match with the right hand. The left leg was considerably weaker than the right, and showed exaggerated reflexes and abortive ankle clonus but no Babinski sign. Papilledema had appeared by this time, being more marked on the right side. A diagnosis of rapidly growing glioma of the right frontal lobe was made and the patient was submitted to exploratory operation by Dr. H. H. Kerr. Preliminary ventriculography disclosed marked depression of both anterior horns with partial obliteration of that on the right side. On exposure of the dura there was great pressure, which was relieved by tapping a cavity in the growth and removing 25 cc. of brownish red fluid. Zenker's solution was injected through the cannula and the flap closed with decompression. The patient failed to regain consciousness and died about twelve hours later.

Necropsy disclosed a soft tumor, cystic and hemorrhagic, lying in the right frontal lobe, appearing on the medial surface over the genu of the corpus callosum (fig. 1). It measured 62 by 46 by 60 mm. and contained a cavity the walls of which were fixed by the fluid injected. The gross and microscopic picture corresponded with that of spongioblastoma multiforme.

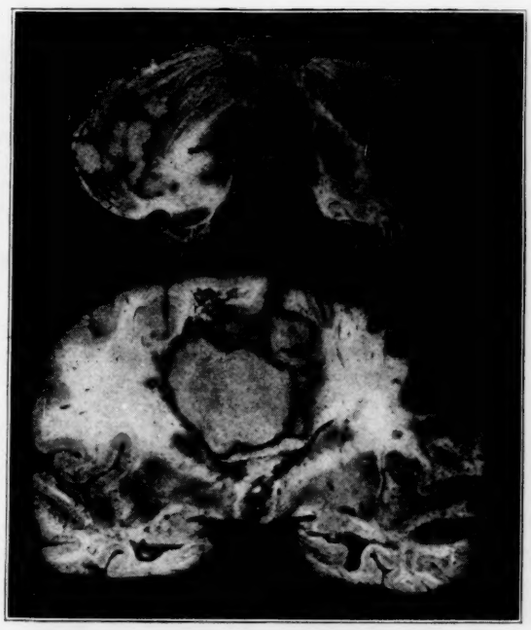

Fig. 2 (case 2).—Tuberculoma of left frontal lobe with implantation in the right frontal lobe; another mass in the right cerebellar hemisphere. The patient showed reflex grasping on both sides, more marked on the right.

CASE 2.—*Tubercles on each side of median longitudinal fissure. Bilateral reflex grasping. Death from generalized tuberculosis.*

J. L., a man, aged 35, colored, was admitted to Gallinger Hospital, Dec. 18, 1927, suffering from delusions of persecution and alcoholism. The history was very fragmentary and unsatisfactory. For more than a year he had suffered from severe headaches and dizzy spells with staggering. Severe epistaxis had occurred two or three times. On one occasion his jaws remained "locked" for twenty-four hours. At Gallinger Hospital he had one convulsion. He said that he felt well except for headache, but he had lost weight and suffered from coughing spells during the three months preceding admission. He continued working until he suddenly became blind in October, 1927, supposedly as a result of wood alcohol poisoning. He was quite demented on admission to St. Elizabeth's Hospital and had to be helped about the ward. He had an evening rise in temperature and presented advanced miliary tuberculosis of the lungs.

On neurologic examination, Feb. 29, 1928, the patient appeared weak, poorly nourished, uncooperative and listless. He said he was able to see on Tuesdays but at no other time. He could walk about the ward avoiding objects and his blindness was believed to be hysterical. The pupils were equal and did not react to light. The eyegrounds showed sharp outlines of the optic disks without atrophy or swelling but with some overfilling of the veins. There was no paralysis, although the patient tended to fall backward when standing. The tendon reflexes in both upper and lower limbs were quite active and equal. Examination of the sensibility could not be carried out. The neck was stiff, with a suggestive Brudzinski sign and a positive Kernig sign on each side. Vasomotor and pilomotor phenomena were unusually active. The abdominal reflexes were brisk and equal; the cremasteric reflex could not be obtained on account of the tonic contraction of this muscle. There was some fibrillary twitching in the quadriceps on each side.

When the fingers were inserted into the right palm and the thenar eminence was rubbed, there was reflex grasping which persisted in spite of commands to the patient to let go. Not infrequently the grasping was clonic. It was increased by pulling outward on the flexed fingers, but the fingers could be pried loose and there was no groping after the retreating object. On the left side there was a suggestion of grasping when the thenar eminence was rubbed and the object withdrawn from the palm.

Examination of the spinal fluid, March 5, revealed a pressure of 28 mm. of mercury, 3 cells per cubic millimeter, and a trace of protein; there was a negative Wassermann reaction and a gold curve of 0023332100. At a second examination, March 14, there were 19 cells per cubic millimeter; the protein was 2 plus and the gold curve 0012233200. The disproportion between the clinical signs and the spinal fluid observations should have suggested the proper diagnosis, but the patient came to necropsy with the diagnosis of tuberculous meningitis. Death occurred, March 23.

At necropsy there was widespread tuberculosis, and a fibrocaseous mass weighing 75 Gm. replacing the right suprarenal gland. In the left cerebral hemisphere there was a fusiform tuberculoma measuring about 10 by 5 cm., lying subcortically close to the median fissure and breaking through the cortex into it about 3 cm. behind the genu of the corpus callosum. In the opposite hemisphere at this point there was apparently a secondary deposit centering about the callosomarginal fissure and involving little but the cortex (fig. 2). Smaller tubercles were found in both occipital lobes not directly in the visual pathways, one in the base of the pons on the left side and a conglomerate mass measuring 2 by 3 cm. in the right cerebellar hemisphere.

CASE 3.—*Arteriosclerotic dementia following repeated vascular insults. Bilateral forced grasping and groping; disturbance of coordination in feeding. Death from arteriosclerosis. Atrophy of frontal lobes.*

G. K., a woman, aged 75, formerly a clerk in one of the federal departments, was taken up by the police because she insisted on going to the office after she had been furloughed. For several months preceding this she had been forgetful, inefficient and careless. On admission to St. Elizabeth's Hospital she was distractible, and she showed some fluctuation in mood, being usually amiable, but sometimes irritable. In 1923, a few months after her admission, she had a cerebral accident, which caused confusion, fever, dyspnea, tachycardia and transient unconsciousness. She recovered in a few days, becoming quieter and more demented. A similar attack in 1926 left her bedridden, mumbling, spoonfed and untidy.

When examined, April 15, 1928, she was completely demented, aphasic and bedridden. The skin had a clear pallor; the peripheral and retinal vessels showed well marked sclerosis, and there

was some contracture of the lower limbs. The upper limbs were hypertonic but not contractured, and both of them at times were waved about apparently aimlessly, groping now for the bedclothes, now toward the face or the gown.

The face preserved a smiling blank expression throughout the examination, except when painful pressure was exerted over bony areas. She remained as nearly passive as any patient could. The head was normal to palpation. The pupils were of medium size, equal and regular, and they responded to light. The patient resisted opening of the eyes. The teeth were all missing and the maxilla was atrophic. When an attempt was made to open the mouth for purposes of examination it was firmly closed and only with considerable difficulty could a tongue depressor be introduced. This closure was seemingly a reflex action, as was apparent during feeding. The jaw jerk was very active and the labial muscles contracted sharply on percussion. The neck was moderately stiff. The thorax was normal, the abdomen thin-walled, with brisk cutaneous reflexes.

The upper extremities were held flexed over the chest. Both hands were usually made into a loose fist, the thumb fitting against the curve of the index. The right hand was more active in grasping and groping, but the left also participated. When the attempt was made to draw away the top sheet, the patient, after groping about a little, caught hold of the edge

Fig. 3 (case 3).—Bilateral reflex grasping. The patient's head and shoulders could be raised from the bed.

and held fast to it in spite of rather notable traction. If the attempt was made to open her mouth, the right hand would be brought up in a groping manner, catch hold of the hand of the examiner, and hold fast. If during this motion it was intercepted, the intercepting object would be grasped just as forcibly, and the left hand would be brought up slowly, with some oscillations and slow tremors, to catch the hand that was pressing on her jaw. Similarly, when an attempt was made to expose the chest, the hands were brought up and clutched the chemise tightly.

When the examiner's fingers were introduced into the patient's palm they were immediately grasped (fig. 3), and the force of the grasp increased as attempts were made to withdraw the fingers or as the palm was scratched. The grasp continued for a minute at a time, even if no attempt at withdrawal was made. During this period the hand was occasionally animated by slow rhythmic tremors, about two to three a second, and of considerable amplitude, consisting mostly of flexion and extension of the wrist, although the fingers occasionally participated, the rate being about twice as fast. The tremor would come and go without apparent cause. When the hand lay passively on the chest, stroking along the thenar eminence resulted in flexion, adduction and pronation, with grasping movements of the fingers. When the hypothenar eminence was stroked, the patient's hand again groped toward the stimulating object. At times the hand could be led back and forth across the bed by such maneuvering. If at any time it caught the object, the grasp immediately tightened and remained fixed. A painful stimulus upset the grasping mechanism somewhat. When a pocket knife with all blades open was placed in her hand, it was grasped as any other object, but the grasp was light. When the points were pressed against the skin, the hand opened. As soon as the pressure was relaxed and the points ceased sticking, the grasp was resumed. The patient did not fumble with the object or attempt to turn it about so that it would not prick her. During all such operations the patient's face bore no trace of emotion. She lay with her eyes half closed, apparently oblivious to the manipulations.

The tendon and periosteal reflexes were exaggerated, without clonus. Mayer's and Hoffmann's signs were exaggerated on the right side and present on the left. Scratching the hypothenar eminence resulted sometimes in adduction of the thumb, sometimes in flexion of the wrist with partial withdrawal of the hand. The nutrition of the skin and muscles seemed quite good. There was slight contracture. The patient responded to pinpricks and deep pressure by withdrawal of the hand, but no other tests for sensibility could be carried out on account of the dementia.

The lower limbs were slightly contracted in flexion. The muscles were rather atrophic and hypertonic but under fairly good coordinated control. The tendon reflexes were exaggerated, without clonus, and a negative Babinski sign was observed. A light tap on the sole at the base of the second toe was followed by flexion of all the toes and adduction of the lesser ones. At times the ankle was extended. The reaction occurred with very little latency, was repeated time and again in a stereotyped manner, required a very slight stimulus, and lasted only a moment. Forcible stroking of the tibial crest yielded a more tonic response of the same sort. These reactions were a little more pronounced on the right side than on the left but were identical in kind. The patient could not sit up or walk. Tests for sensibility in the lower extremities were limited to pricking and pinching, to both of which the patient responded by withdrawal of the foot. She made no outcry or other objection.

Feeding, according to the nurses' observations and our own, was a difficult and complicated affair. The patient willingly partook of everything, without making any objections; she was not resistive in any way, yet she was practically unable to open her mouth for the purpose of taking food. When she attempted to do so her mouth closed with a snap, and any attempt to open it by external force met with invincible resistance. If a tongue-blade was introduced into the mouth the patient made efforts to get rid of it, working against it with the tongue so that it was difficult to introduce it into the pharynx. When finally it could be pressed against the posterior pharyngeal wall, it provoked a mild gag reflex with wide opening of the mouth.

In feeding the patient very small morsels had to be given; otherwise they could not be introduced into the mouth. Even the small ones were frequently rejected, the tongue curling over them and pushing them through the lips. The patient could swallow readily and apparently enjoyed her food, but she could not manipulate it properly in her mouth. We have observed this phenomenon in an infant, aged 8 months, who was just beginning to take solid food. The patient's actions resembled so closely the behavior of the infant that she was given a nursing bottle and nipple. As soon as a drop of milk touched her lips she opened her mouth wide enough for the introduction of the nipple, rolled it about with her tongue, and sucked on it. There was no rhythmic contraction of the jaws, although within a few minutes she had taken about 4 ounces of milk. The nipple was easily released from the mouth. Moving it about in the mouth seemed to stimulate sucking. She held the bottle in her hand for a time, but lowered it too much to take more milk. She would pull it from her mouth, at the same time clamping the nipple till it was feared that she would pull the nipple off. She seemed satisfied after she had taken 5 ounces and shut her mouth against more.

At necropsy the body weighed 34.5 Kg. and measured 147 cm. There were contractures of the lower limbs. Except for atrophy and arteriosclerosis, the organs did not show significant changes. The brain weighed only 890 Gm. and was surrounded

by 200 cc. fluid. The meninges were slightly thickened and showed enlarged arachnoid villi. The vessels at the base were tortuous and calcified. There was extreme atrophy of the hemispheres, especially in the frontal regions, where the fissures gaped widely and the convolutions were narrowed and firm. No focal lesions were visible externally. The ventricles were widely dilated and extended much farther forward than usual, leaving a thin layer of white matter between the ependyma and the cortex. This white matter was of good color except at

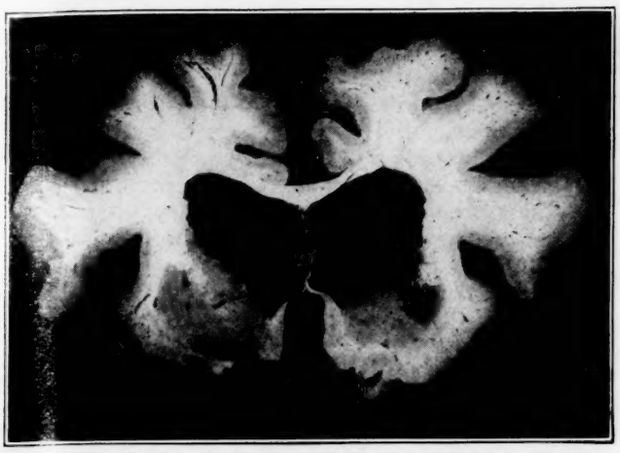

Fig. 4 (case 3).—Atrophy of both hemispheres, which was especially marked in the frontal regions, and dilatation of the lateral ventricles. The patient showed bilateral reflex grasping.

the lateral margin of the ventricle, where it had a grayish translucent appearance. In the right hemisphere there were two infarcts, one involving the anterior limb of the internal capsule with the adjacent gray nuclei, the other destroying the inner portion of the globus pallidus. The basal ganglions were markedly atrophic, but no other focal lesions were evident. The cerebellum and brain stem were likewise atrophic.

The phenomena in this case were attributed to the extreme atrophy of the frontal lobes rather than to the focal lesions encountered in the right hemisphere.

CASE 4.—*Cerebral arteriosclerosis with dementia; bilateral reflex grasping; death from cardiac failure. Atrophy of both frontal lobes and pons.*

B. M., a woman, aged 60, was admitted to St. Elizabeth's Hospital, Nov. 1, 1927, and died, Aug. 7, 1928. Her past history was unimportant; her father had died at 60 of a paralytic stroke. Her illness began with a fall in September, 1926, after which she was weak on the right side and could not speak for several hours. On admission she showed residuals of right hemiplegia and loss of memory; she was completely disoriented and was untidy in her habits. Within a few months she became completely demented and mute, and early in August, 1928, developed fever and signs of pulmonary consolidation. Examination on July 23, two weeks before death, when she was still in her usual condition, revealed the following: The head was normal, and the pupils were equal and active; the eyegrounds were not satisfactorily observed because of the constant motion. The patient resisted opening of the eyes, apparently a manifestation of "tonic innervation." The face was calm and expressionless during the examination, and on supra-orbital pressure grimaced normally, no weakness being detected. The tongue was protruded with slight tremor. When an attempt was made to open the mouth by pressing on the chin there was tonic closure of the mouth, and when the tongue blade was introduced it provoked puckering of the mouth and coordinated resistance by the lips, jaw and tongue; yet to judge from her facial expression, the patient did not seem to resent the maneuver. According to the nurses, she was able to take only very small morsels of food, any large piece being rejected, as in case 3. To all appearances she relished her food and could chew it without difficulty and swallow normally. A mild gag reflex was elicited by pressure on the pharynx. The hands were kept folded over the chest most of the time. There was no atrophy or deformity; the muscles were weak but hypertonic with exaggerated tendon reflexes. Hoffmann's and Mayer's signs were present on both sides, and Marie's sign on the right. On stimulation of the palm and thenar eminence by deep stroking with the finger there was moderately active grasping on the right side, which quickly relaxed when the friction was discontinued. There was some tremor present. On the left side the grasp was maintained, and there was some tendency to grope toward the covers, the chemise or the face. The grasp often became clonic in character and the hand was occasionally activated by slow rhythmic movements at the wrist. The abdominal cutaneous reflexes were absent, but the rectus tendon reflexes were exaggerated.

The lower limbs were in slight flexion contracture with hyperactive reflexes and bilateral ankle clonus and Babinski sign. On the left side, although almost any stimulus would provoke dorsal extension of the great toe, a mild touch at the base of the second toe would occasionally provoke flexion of all the toes.

Necropsy one hour postmortem revealed generalized arteriosclerosis with emphysema and bronchiectasis. The brain was small, weighing only 940 Gm. The frontal lobes seemed especially atrophic with narrow convolutions and pronounced fissures, and there was an excess of cerebral fluid, measuring 240 cc. The pons was exceptionally atrophic, both sides appearing sunken and narrow. The meninges were slightly opaque over the frontal area; the blood vessels were markedly sclerosed, dilated and tortuous. Section of the brain after fixation revealed dilatation of the ventricles and reduction of the subcortical white matter, with a thin corpus callosum (fig. 5). In the left frontal pole underlying the gyrus rectus opposite the genu was a small cystic infarct. Farther posterior, where the ventricles opened, the white matter of the frontal lobes presented a translucent grayish aspect and was markedly diminished in amount. On the right side, opposite the head of the caudate nucleus, lying in the anterior limb of the internal capsule, was a small cystic infarct. The atrophy of the white matter was apparent throughout both frontal lobes but in no other portion of the brain. Gross section of the pons revealed prominent pontile nuclei with thin pyramidal tracts.

CASE 5.—*Paranoia with senile deterioration. Flexion contracture on right, reflex grasping on left. Death from cardiac failure. Bilateral atrophy of white matter of frontal lobes and of the pons.*

S. M., a white woman, was admitted to St. Elizabeth's Hospital, April 20, 1906, and died Aug. 18, 1928, at the age of 82. Her delusions of persecution drove her to seek redress

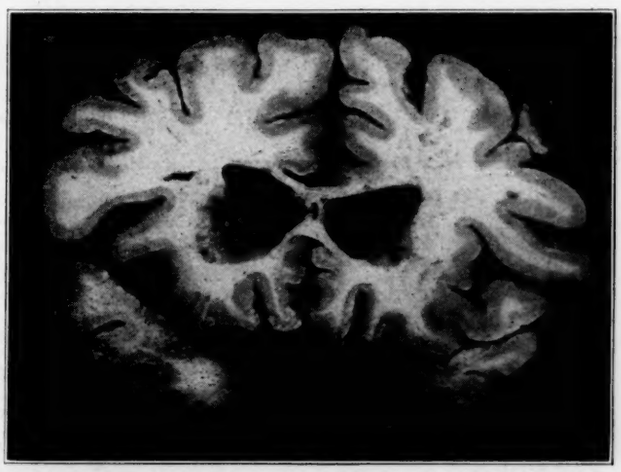

Fig. 5 (case 4).—Atrophy and infarcts in both frontal lobes. Bilateral reflex grasping had been present.

from the President, and she was committed to the hospital. She was meddlesome and officious, and occasionally disturbed, and her delusions of grandeur and persecution subsided only with advancing deterioration. No definite apoplectic insults were noted; yet in 1926 she became helpless and developed progressive contracture of the right arm and leg with severe dementia. Death resulted from arteriosclerosis and cardiac failure.

At examination, July 23, 1928, the patient was practically deaf, blind and mute. The pupils were small and equal, responding slightly to light. Cataracts prevented examination of the fundus. The eyeballs moved in conjunction without nystagmus. Facial mimicry was impoverished, although grimacing due to pain was symmetrical. There was little resistance to the introduction of a tongue blade, although the patient pursed up her lips. The mouth could be opened without difficulty by pressure on the chin. The pharyngeal reflex was weak.

The right arm was in strong contracture, the atrophic hand being folded on the chest with the index finger extended. The left upper limb was moved about freely by the patient. Hoffmann's sign was doubtfully present on each side; Mayer's sign was absent on the right, exaggerated on the left. Marie's sign was absent. Reflex grasping was elicited by forceful friction of the palm and thenar eminence on the left side but was liable to relax quickly unless traction was continued on the flexed fingers. There was no definite groping, although the left hand tremulously sought the site of painful disturbance in the lower limb. On both sides there was pronounced tremor, slow and rhythmic, brought out by action and quickly dying away. The left hand tended to grasp the bedclothes as they were drawn away but did not interfere with feeding. The tendon reflexes in both upper extremities were very active.

The abdominal reflexes were not obtained. The lower extremities were drawn up in flexion, which was invincible on the right. The Babinski sign was negative bilaterally; the Oppenheim negative on the right but positive on the left. The tendon reflexes were quite brisk but without clonus. Tapping at the base of the left second toe occasionally produced flexion of all the toes, but usually the whole foot was withdrawn with marked tremor.

The necropsy, performed forty-six hours after death, revealed senile emaciation (31.5 Kg.), and severe contracture of both legs and the right arm. Generalized arteriosclerosis with senile atrophy of all the organs was noted. The heart showed some fibrous changes in the myocardium. The brain was considerably shrunken, weighing only 923 Gm., and being surrounded by 230 cc. of fluid. The meninges were essentially normal, the arteries dilated, tortuous and atheromatous. No thromboses were encountered. The frontal lobes in particular were markedly atrophic, with narrow convolutions and broad fissures. The pons likewise showed general atrophy. Section after fixation revealed on both lateral aspects of the dilated anterior horns a grayish porous condition of the white matter but no definite areas of infarction. The two hemispheres seemed about equally affected. The cortex was thin, the corpus callosum not markedly atrophic. The basal ganglions were free from significant lesions. Section through the pons revealed reduction in the size of the ventral part, with prominent gray masses.

Delayed Operation in Tubal Disease.—Almost twenty years ago F. F. Simpson read before the American Gynecological Society a paper which revolutionized the treatment of tubal disease. Prior to that time its management had been purely surgical. Operation was done routinely, as soon as the diagnosis was made, and because it was done in the acute stage, ablation of the entire genital tract was often a necessary consequence. The result was not only a group of thoroughly unsexed women, at least in the physiologic sense, but also a death rate approaching 20 per cent. Then came Simpson with his advocacy of the delayed operation, with the plea that surgery should never be resorted to in acute salpingitis until the temperature had been consistently normal for at least three weeks, even after repeated bimanual examination, until there had been absolute recovery from the acute attack, and until there had been a complete absorption of the inflammatory exudate surrounding the primary focus of infection. These astounding proposals could not be ignored, revolutionary as they were, because their advocate was able to show for them in a series of more than 400 cases the hitherto unheard of mortality of 1 per cent.—Miller, C. J.: Salpingitis: The Case for Expectant Treatment, *Am. J. Obst. & Gynec.*, December, 1928.

INFANTILE KIDNEY

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AND
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DES MOINES, IOWA

Numerous articles have appeared in medical journals dealing with kidney anomalies which are no longer considered rarities. When one investigates carefully the literature concerning infantile kidney, one is impressed with the scarcity of contributions.

Geraghty and Plaggemeyer [1] have discussed this unusual anomaly and have emphasized its infrequency. Doria [2] has reported a case discovered at necropsy. Robinson [3] covers the subject of atrophic or rudimentary kidney; he does not limit his discussion solely to the small kidney but considers all forms of atrophic kidney resulting from various diseases. Kaufman [4] described in detail a small kidney of infantile character, discovered at the time of an operation. Krotoszyner [5] gave his observation of anomalies of the urinary tract and reported a case of renal hypoplasia. Lewis and Bethune [6] reported a case of infantile kidney, complicated by an occlusion of the ureter with nephrolithiasis on the opposite side.

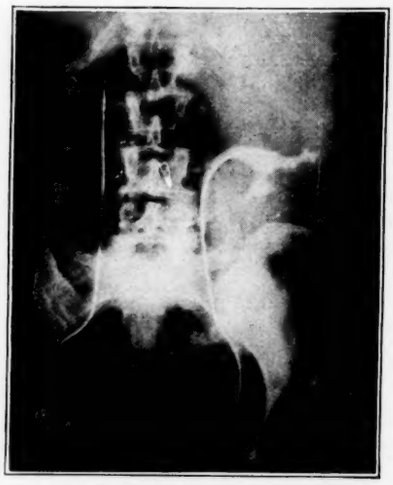

Fig. 1.—Pyelogram of the left kidney showing a distinct filling defect deformity.

Infantile kidney, often designated as congenital atrophic kidney or renal hypoplasia, is vitally important in urologic differential diagnosis and must be thought of whenever surgery of the other kidney is contemplated.

Our interest was aroused in the study of this relatively rare anomaly by an unusual case. Many theories have been offered as to the origin of this anomaly from the embryologic point of view, and all agree that it is the result of an arrested fetal development.

Sufficient evidence has been obtained by competent and well qualified investigators to substantiate the view that atrophic changes in a kidney can be the result of various diseases. It is extremely difficult, however, to differentiate between the small kidney that is the result of some acquired pathologic process and the kidney that is atrophic because of some congenital nondevelopment.

The size of these kidneys may vary from that of a small bean to that of an English walnut. The kidney is located usually in the same region as is the normal

1. Geraghty, J. T., and Plaggemeyer, H. W.: The Practical Importance of Infantile Kidney in Renal Diagnosis, J. A. M. A. **61:** 2224 (Dec. 20) 1915.
2. Doria, J. R. da C.: A Case of Atrophia Congenita of the Left Rim, Legal Medical Service, Bahia, 1924.
3. Robinson, Bryon: Atrophic or Rudimentary Kidney, A. Practitioner News **38:** 555-560 (Sept.) 1912.
4. Kaufman, L. R.: Congenital Atrophy of the Kidney, Urol. & Cutan. Rev. **26:** 283-286 (May) 1922.
5. Krotoszyner, Martin: Observation on Anomalies of the Urinary Tract, Ann. Surg. **65:** 560 (May) 1917.
6. Lewis, J. S., and Bethune, C. W.: Infantile Kidney and Occlusion of Ureter with Nephrolithiasis on the Opposite Side, Am. J. Urol. **8:** 599, 1912.

organ. The pelvis of such a kidney may be precisely similar to the normal pelvis, with the exception of its distinct diminution in size, and arising from it there may be only a single calix or multiple calices which are also of minute dimensions. Histologically it does not differ in any way from the usual normal kidney except for a noticeable decrease in its cortical area and a marked deficiency in the number of glomeruli. The ureter of infantile kidney varies; it may be normal with some diminution in its size, or it may present other abnormalities.

Fig. 2.—Pyelogram of right infantile kidney, showing rudimentary changes in all the calices, particularly the minor ones.

The clinical diagnosis of infantile kidney is not simple. Frequently there are no symptoms that designate with any degree of certainty whether or not this pathologic entity is present. The roentgenogram is seldom of assistance because of the extreme difficulty in obtaining proper outline in kidneys that show great diminution in size. Cystoscopy, in conjunction with pyelography and the usual standard functional test, is of practical assistance.

The bladder itself usually does not present anything of interest, unless some other concomitant pathologic condition is present. Observation of the ureteral orifices reveals, in most instances, nothing abnormal. Some investigators, however, describe atrophic changes of the circular muscle about the meatus.

The ureteral catheter provides an excellent means of disclosing any obstruction that may be present along the ureter in its course from the bladder orifice to the renal pelvis, thereby determining permeability of the ureter on the side on which the infantile kidney exists.

The examination of urine obtained from a ureteral catheterized specimen from the infantile kidney may not show anything abnormal with the usual chemical and microscopic tests, unless it is the seat of some pathologic process. For this reason one must not take for granted that he is contending with a normal kidney; disastrous results may occur when dependence is placed on this observation. Considerable decrease in the amount of urine will usually be observed. Nevertheless, too much significance cannot be attached to this, because on numerous occasions such diminution can be accounted for by a reflex inhibition following cystoscopic manipulation. On the other hand, the other kidney will secrete proportionately greater quantities of urine, signifying a compensatory effort on its part.

Renal functional tests are of great diagnostic help. The dye output from an infantile kidney is always much diminished in amount while the output from the opposite kidney is increased. The appearance of the dye from such a kidney is in most instances delayed, while from the opposite kidney it is usually within the normal time limit. An outstanding fact, first recognized by Geraghty and Plaggemeyer,[1] pertaining to infantile kidneys was their ability to concentrate urea within normal limits, although not capable of performing the function of a full kidney.

Pyelography also serves as a means through which a diagnosis of this condition can be determined; however, it is sometimes of doubtful value since the size of the kidney pelvis is usually not a reliable index of the size of the kidney. Examination of pyelograms will reveal that the renal pelvis and calices of the kidney are exceedingly diminished in size in comparison with the normal. In some cases the pelvic outline will be completely effaced, so that no true pelvis will be discernible. In other instances the pelvis will assume a normal shape with an average size but the calices will be more or less obliterated. The kidney may, however, be so undeveloped that the pyelogram will not offer anything of importance by which such a kidney can be recognized.

It is difficult at times to differentiate these forms of anomalies from the pyelographic point of view with other pathologic conditions of the kidney that present pyelograms similar to those of infantile kidney. We refer particularly to renal tuberculosis, tumors of the kidney and those kidneys in which chronic inflammatory lesions predominate.

REPORT OF CASE

History.—Mrs. W. I., aged 53, an Iowan, first observed July 12, 1927, complained chiefly of pain under the left shoulder. She had two children, aged 23 and 26 years. The climacteric occurred at the age of 47. Her past medical history was negative with the exception of hyperacidity fifteen years previously and cystitis ten years previously.

Jan. 7, 1927, following a banquet in the evening, the patient was seized with a sudden acute pain under the left scapula which persisted for about six hours at its original site, radiating down the left side to about the crest of the ilium. An hour after the onset she vomited gastric contents and continued to do so at frequent intervals for the next two or three hours. She was given one-half grain (32 mg.) of morphine but relief was not obtained, and half an hour later one-fourth grain (16 mg.) of morphine was given. There were no urinary symptoms and all specimens of urine were normal. After she remained in bed for two weeks the pain gradually subsided, leaving a constant soreness. July 9, she suffered a similar attack except that the condition came on more quickly than the previous one and the radiation of the pain at this time was directly across the upper part of the abdomen to the right costal margin. The urine specimen at this time, according to the family physician, contained pus, albumin, and a few red blood cells.

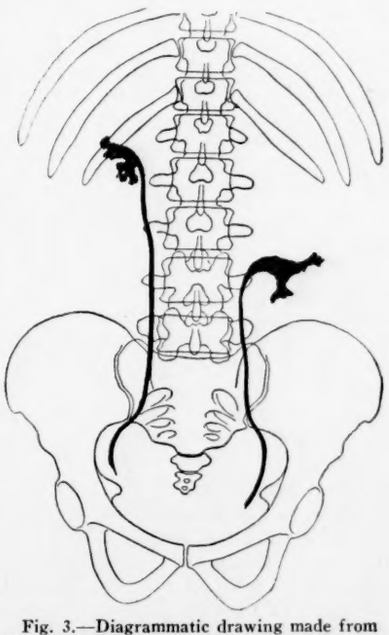

Fig. 3.—Diagrammatic drawing made from the pyelograms to illustrate the difference between the two kidneys.

July 12, the patient was rather pale and showed some evidence of loss of weight. There was a general fulness of the left upper quadrant of the abdomen, which moved slightly with

respiration. Palpation in this region revealed a firm rounded mass extending about three fingerbreadths below on the left costal margin. It was somewhat tender anteriorly as one made pressure over the abdomen and left renal region. Glandular enlargement was not present. The blood pressure was 126 systolic and 80 diastolic; the pulse rate and the temperature were normal.

The patient was advised to enter a hospital for a urologic examination.

July 12, the blood count revealed: red blood cells, 5,000,000; white blood cells, 18,600; polymorphonuclears, 89 per cent; lymphocytes, 10 per cent; transitionals, 1 per cent. The urine specimen was straw colored, cloudy and acid, with a specific gravity of 1.020; there was a trace of albumin, but no sugar. Microscopically, 2 or 3 white blood cells were found. The blood urea was 6.5 mg. per hundred cubic centimeters. Phenolsulphonphthalein determination gave for the first specimen, 170 cc., 20 per cent; for the second specimen, 60 cc., 20 per cent, making a total for the two specimens of 40 per cent.

The first cystoscopic examination was done July 12. The bladder was essentially normal. Ureteral catheters passed without any obstruction to each kidney.

Phenolsulphonphthalein, when given intravenously, appeared on the left side in seven minutes; the amount secreted was 20 per cent; on the right side a very faint trace appeared in nineteen minutes. The amount secreted could not be estimated because of the small quantity. There was a scant amount of urine from the right kidney. Microscopic examination showed an occasional leukocyte. The was a moderate amount of urine from the left kidney, and an occasional leukocyte was revealed microscopically. Sodium iodide, 25 cc., was injected into the pelvis of the left kidney. A pyelogram revealed a well defined filling defect of the upper pole and a flattening out of its pelvis, significant of renal neoplasm.

July 19, a second cystoscopic examination was done. The bladder was essentially normal. Phenolsulphonphthalein was given intravenously; it appeared after four and one-half minutes on the left side, and the amount secreted was 7.5 per cent; on the right side a slight trace appeared in fifteen minutes; the amount could not be estimated because of the small quantity secreted.

There was a scant amount of urine from the right kidney. There was a moderate amount of urine from the left kidney; microscopically, both specimens revealed an occasional leukocyte; 4.5 cc. of 12.5 per cent sodium iodide was injected into the pelvis of the right kidney. The pyelogram revealed changes in both major and minor calices which indicated a rudimentary appearance.

The third cystoscopic examination was done, November 12. The bladder was essentially normal. Indigo carmine was administered intravenously; it appeared very strong from the left ureter in five minutes, while only a faint trace came from the right in thirty minutes. There was a scant amount of urine from the right kidney, with an occasional leukocyte and 1 per cent urea nitrogen. There was a moderate amount of urine from the left kidney, with an occasional leukocyte, and 1 per cent urea nitrogen.

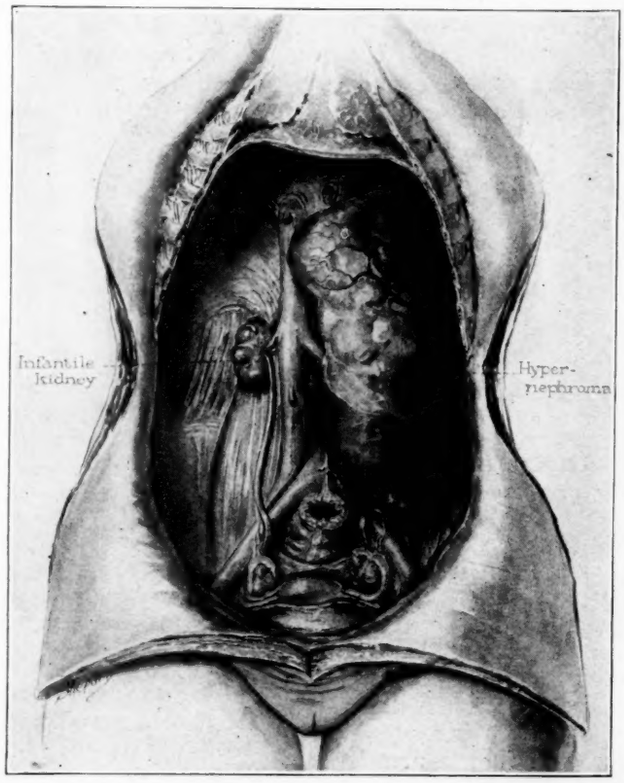

Fig. 4.—Drawing made from necropsy observations showing the small infantile kidney on the right and an extensive hypernephroma of the left kidney.

While the pyelogram of the right kidney was not typical in every degree in this instance of an infantile kidney, still there was some resemblance. Other urologic observations were complete enough to make the diagnosis; namely, the normal character of the urine, the small amount of urine excreted, the normal urea concentration of the urine, the marked decrease in function as determined repeatedly by the various dye tests, and, lastly, the normal function of the left kidney, although distinctly diseased.

Operation and Result.—Although the patient was informed on previous occasions that because of the marked functional incapacity of the right kidney operative procedure was not deemed advisable, she returned to the hospital, November 11, asking that surgical procedure be instituted. November 17, an exploratory operation was performed with the idea that perhaps a partial resection of the left kidney could be carried out. The attempt proved futile. The patient became shocked to such an extent that further work had to be abandoned. Postoperative measures were resorted to but the patient succumbed a few hours later. During the operative exploration a massive tumor was observed occupying the greater portion of the left section of the abdomen. Permission for a necropsy was requested and granted with the understanding that the structures involved should remain undisturbed.

Necropsy.—The left kidney was enormously enlarged. It showed evidences that there had been a marked hypertrophy during life. Approximately the superior two thirds of the kidney was well encapsulated. This was partially filled by a necrotic blood-tinged material. It had the appearance of a degenerative hypernephroma. The tumor mass and the remaining kidney substance was firmly fixed to the posterior parietes, extending mesially as far as the spinal column. The remaining portion of the kidney measured 17 by 7 by 5 cm. The lower pole contained a cyst about the size of an English walnut. The pelvis of the kidney had been entirely taken up by the tumor mass with the exception of the portion of the lower segment.

The right kidney on examination measured 6 by 3 by 2 cm. It had the appearance of being normal in every respect but minute in size, and in comparison with its pyelogram was found to be much smaller. The ureter entered the midportion of the kidney substance without a demonstrable formation of a pelvis and the examination of it did not disclose anything abnormal.

CONCLUSIONS

The following are the important and salient facts that should be remembered with reference to infantile kidney:

1. The function of an infantile kidney shows marked impairment as determined by the colorimetric dyes but still is able to excrete normal urine and concentrate urea in normal quantities.

2. The function of a kidney in which disease is present is always greater than that of the supposedly normal infantile kidney.

3. Pyelography is often of assistance in the diagnosis of this rare condition but cannot always be relied on.

4. The decision before advising surgery in a diseased kidney when the other is infantile must be made cautiously because of the inability of the infantile kidney to undergo compensatory hypertrophy, an essential factor if a successful outcome is to be attained.

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FAMILIAL PURPURA HEMORRHAGICA WITHOUT THROMBOPENIA

HEREDITARY HEMORRHAGIC THROMBASTHENIA *

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LOS ANGELES

"It is becoming increasingly evident that the group termed 'the hemorrhagic diseases' includes a large number of abnormal conditions, and that, at the present time, it is a fruitless task to attempt to unravel the various entities embraced by the clinical conditions which are assembled under this general head." This statement, made thirteen years ago in an oft quoted address by Alfred Hess,[1] is unfortunately still applicable today. Nevertheless, as time goes on, the accumulation of a sufficient number of atypical cases with similar manifestations permits the formation of new groups, and subsequently necessitates a partial reclassification.

Such a group of cases has been reported by Glanzmann.[2] He has described in detail eight families with an unusual form of purpura and has proposed the name hereditary hemorrhagic thrombasthenia. The disease affects both sexes and is usually transmitted by the females. Briefly, the symptomatology consists of attacks of severe epistaxis and a tendency to develop ecchymotic areas spontaneously or following slight trauma. The hemoglobin determinations and the red and white blood cell and differential counts showed only such a deviation from the normal as one would expect in an anemia due to loss of blood. It was consistently noted that in nearly every case the number of platelets was normal or slightly increased. The bleeding time was rarely prolonged, but apparently more blood appeared and a larger amount could be expressed from a minute finger wound than in normal controls. The coagulation time was not altered, although occasionally the clot did not entirely solidify. A failure of the clot to retract normally is a point particularly stressed by Glanzmann. In many of the cases retraction was entirely absent, while in others it was only partly complete with occasional settling of the red cells to the bottom of the tube.

Minot[3] has recently reported two families with a somewhat similar hemorrhagic condition. In his cases the bleeding time was greatly prolonged and varied between thirty minutes and an hour or more. The number of platelets, coagulation time, clot retraction and tourniquet test were normal. The repeated attacks of epistaxis were without doubt a purpuric manifestation, as nasal telangiectases were not present. Herniotomy, appendectomy and other operative procedures were not followed by any undue bleeding.

Some cases that closely correspond to these, with prolongation of both the coagulation and the bleeding time, are recorded by Buckman.[4] The number of platelets and the degree of clot retraction were not altered. A family history of bleeding was lacking in one of his cases, but in all other respects it might well be included in this group.

Giffin[5] has described a woman, aged 33, with epistaxis and other purpuric manifestations, designating the condition "severe hemorrhagic disease occurring in four generations." The bleeding time and prothrombin time were prolonged, whereas the number of platelets and coagulation time were normal. He also reported the case of a girl, aged 9 years, with similar changes in the blood but without a family history of bleeding. The bleeding time was prolonged despite a normal platelet count. The clot did not retract. Bleeding from the nose and gums was extremely severe and uninfluenced by injections of calcium, thromboplastic substances and some sixteen transfusions. Splenectomy was performed with no immediate response and no alteration in the condition of the blood. After a two months' interval, gradual improvement occurred and the child was finally discharged in good condition. The spleen did not show any other pathologic changes, except an increase in fibrous tissue. This case is mentioned again by Kennedy,[6] who has noted that since the onset of menstruation the periods have been accompanied by an alarming profuse menorrhagia. The patient also had a severe hemorrhage following the extraction of a tooth.

Little and Ayres[7] have traced a family with similar manifestations through five generations and report two typical cases. Both showed a prolonged bleeding time with a normal number of platelets and no abnormality in the coagulation time. In one patient bleeding persisted despite the usual therapeutic measures and splenectomy was finally resorted to. Death occurred nine hours after the operation.

Two more cases in a mother and son are briefly mentioned by Rosenthal[8] and classified as chronic thrombasthenic purpura. The platelets were normal and the bleeding time and coagulation time prolonged. He also refers to a similarly affected family described by Van der Zande.[9]

A report of considerable interest from an historical point of view was mentioned by Jonathan Hutchinson[10] in a lecture delivered about fifty years ago. His description is as follows:

> A school boy was sent to me by Mr. Harrison, of Braintree, on account of repeated and alarming attacks of epistaxis. They had been so profuse and so frequently recurrent that he had lost much of his color and strength. The point, however, which most caused anxiety was that his elder brother had died of it. In him the liability had commenced at 13½, had persisted for two years, and finally, after continuing for four days, it ended in

* From the Children's Hospital.

1. Hess, A. F.: The Blood and the Blood Vessels in Hemophilia and Other Hemorrhagic Diseases, Arch. Int. Med. **17**: 203 (Feb.) 1916.
2. Glanzmann, E.: Hereditäre hämorrhagische Thrombasthenie, Jahrb. f. Kinderh. **88**: 1-42, 113-141, 1918.
3. Minot, G. R.: A Familial Hemorrhagic Condition Associated with Prolongation of the Bleeding Time, Am. J. M. Sc. **175**: 301 (March) 1928.
4. Buckman, T. E.: Atypical Pathologic Hemorrhage in Early Life, Am. J. M. Sc. **175**: 307 (March) 1928.
5. Giffin, H. Z.: Unusual Types of Hemorrhagic Disease, Am. J. M. Sc. **175**: 44 (Jan.) 1928.
6. Kennedy, R. L. J.: Diseases of Children Benefited by Splenectomy, J. A. M. A. **91**: 874 (Sept. 22) 1928.
7. Little, W. D., and Ayres, W. W.: Hemorrhagic Disease, J. A. M. A. **91**: 1251 (Oct. 27) 1928.
8. Rosenthal, N.: The Blood Picture in Purpura, J. Lab. & Clin. Med. **13**: 303 (Jan.) 1928.
9. Van der Zande, F.: Pseudohemophilia, Nederlandsch. Tijdschr. v. Geneesk. **1**: 544 (Feb. 10) 1923; cited by Rosenthal.
10. Hutchinson, Jonathan: The Pedigree of Disease, New York, William Wood and Co., 1885, pp. 101-102.

death. Their paternal grandfather had suffered much from gout, and their father at the age of 22 had had severe epistaxis. [And later he concludes with the following remark:] My own experience as to retinitis hemorrhagica, blood patches in the conjunctiva, cerebral hemorrhage, epistaxis and other allied disorders leads me, however, to attach very great importance to the history of inherited gout as their frequent cause.

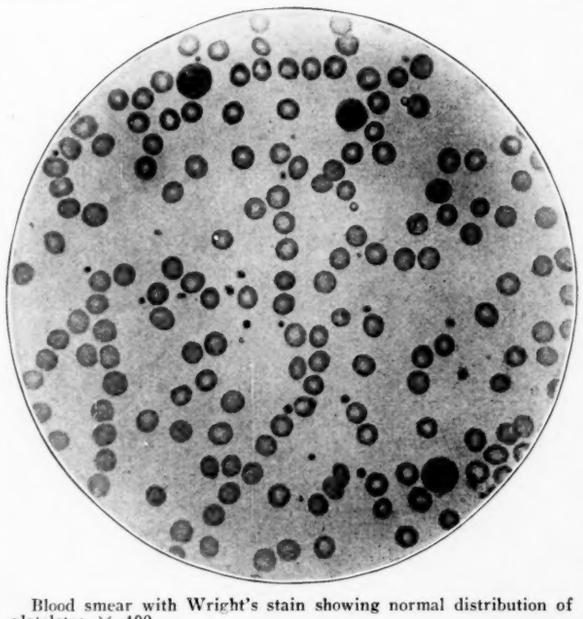
REPORT OF CASE

We have had the opportunity to observe an additional case at the Children's Hospital in Los Angeles.

A boy, aged 13, had been admitted to the wards on numerous occasions during the past nine years. The mother had always manifested a tendency toward easy bruising, and one brother who died at 3 years of age from a street accident was similarly affected and also bled unduly from slight injuries. The patient was first seen at the age of 3½ years with an infected scrotal hematoma resulting from a fall against a chair. There was a history of frequent bruises and purpuric eruptions since birth. He had pertussis at 1 year and influenza during the epidemic of 1918. At 5 years of age he had a severe nosebleed and had since suffered from frequent recurrences. At 6 years of age he had measles with a hemorrhage into the rash, and one month later was admitted with a generalized purpuric eruption.

Examination at this time showed large and inflamed tonsils, enlarged cervical glands, dextrocardia, a soft systolic murmur best heard near the midline in the fourth right interspace, and a palpable liver edge on the left side. There was a moderate secondary anemia, normal white and differential counts, a bleeding time of six and one-half minutes, and a coagulation time of six minutes. A diagnosis was made of situs transversus associated with an atypical blood dyscrasia.

He remained well after this attack until he was 7½ years old, at which time he had scarlet fever complicated by an acute nephritis. As the nosebleeds became more frequent, a tonsillectomy and adenoidectomy were advised, but permission could not be obtained. At the age of 10 years the patient received two emergency transfusions because of prolonged nosebleeds. He was given a transfusion again at 12 years, and this time there were numerous ecchymotic areas over the entire body in addition to the epistaxis and oozing from the gums. The blood pressure was 116 systolic and 72 diastolic. The urine was normal, and the Wassermann and tuberculin reactions were negative. Repeated nose and throat examinations did not show any evidence of localized bleeding points, ulcerations or telangiectases. Bleeding finally stopped, but recurred six weeks later. He received four transfusions of about 150 cc. each before improvement took place. Roentgenograms of the long bones showed small but regular areas of lessened density in the lower metaphysis of the left femur and in the upper portion of the left tibia. The platelet count on this admission was never lower than 200,000 per cubic millimeter of blood and on one occasion was as high as 322,500. The bleeding time varied from twenty to thirty-five minutes (Duke's method from ear), while the coagulation time remained between six and eight minutes. Determinations of the blood calcium and phosphorus were normal. The patient was seen at this time by Dr. Harold K. Faber, who felt that he presented an unusual type of purpura. After studying the fresh blood smears, it was decided that splenectomy seemed inadvisable because of the presence of such a high proportion of platelets. Another examination a few months later showed 224,000 platelets and a bleeding time of twenty-two and one-half minutes. The coagulation time was three minutes (Lee and White).



Blood smear with Wright's stain showing normal distribution of platelets; × 400.

The patient was last seen in his home in San Pedro, Dec. 28, 1928. He weighed 83 pounds (38 Kg.), having gained about 10 pounds (4.5 Kg.) during the previous six months, and had an appearance of general physical well being which had always been lacking at former examinations. At this time the tourniquet test was negative. Coagulation of blood was complete in five minutes. At room temperature the clot did not show any retraction after twenty-four hours and only one or two drops of serum were evident. Another specimen placed in an incubator over night showed the clot adherent to the test tube, except at one small place near the top, but with considerable serum above.

In November a tooth had been extracted, followed by moderate oozing of blood for two days. A blood smear made shortly afterward revealed the following differential count: polymorphonuclear neutrophils, 46 per cent; eosinophils, 1; basophils, 0; small lymphocytes, 44; large lymphocytes, 4, and monocytes, 5 per cent. Additional blood smears made at the same time were forwarded to Dr. Faber at the Stanford University School of Medicine, who reported that the red and white cells were normal in appearance, and the platelets very abundant. Counts of seventeen fields, made by Miss Hadden of the department, showed a ratio of one platelet to 12.1 red blood cells. On the basis of a 5,000,000 red count the platelets would number 413,000. The platelets stained well and varied considerably in size. The great majority were within normal limits (from 2 to 3.6 microns) but a few abnormally large forms were seen, one of which was 7 microns in diameter.

COMMENT

A critical analysis of the cases mentioned makes a proper classification extremely difficult. It is at once apparent that they do not correspond to any of the well known types of purpura, and that they have much in common for one who is "seeking similarities and not diversities." The purpuric manifestations associated with a normal platelet count and the heredofamilial factor are fairly constant observations, whereas a considerable variation exists in the bleeding and coagulation times, as well as in the clot retraction phenomenon. The confusion is partly due to the lack of uniform laboratory methods for these determinations and also to the fact that a definite variation occurred in many of the individual cases at subsequent examinations. The condition must carefully be differentiated from other forms of purpura, particularly from those rare cases of familial Werlhof's disease reported by Hess,[1] Rosenfeld[11] and others, and also from hemophilia and familial telangiectasia.

The etiologic mechanism in this form of purpura is of course not clearly understood, but Glanzmann[2] has attributed it to a functional insufficiency of the platelets. The inability of the clot to retract is due, he feels, to the absence of a ferment, the so-called retractozyme, or its presence in a less active form. The isolated platelets obtained from one of his patients caused coagulation of a platelet-free normal plasma, but clot

11. Rosenfeld, A. V.: Idiopathic Purpura with Unusual Features, Arch. Int. Med. **27**: 465 (April) 1921.

retraction did not occur. A similar experiment is mentioned by Buckman,[4] who caused coagulation of blood from a hemophiliac patient with a suspension of platelets from another of his patients. The blood coagulated in fifteen minutes, which corresponded exactly to the coagulation time of a normal control, but no mention is made of clot retraction. Too much emphasis should not be placed on the ability of the clot to retract, as this phenomenon is not always constant in normal persons. Glanzmann has offered additional evidence, based on histologic studies, to support his theory of pathologic platelets. He has found abnormalities in the size of the platelets and also alterations in the protoplasm and granules. Pyknosis and other signs of degeneration were frequently encountered. Some of his conclusions are rather severely criticized by Frank [12] in his discussion of pseudohemophiliac conditions. He states that he has seen similar pathologic disturbances in other diseases, and feels that some of the changes are the result of faulty staining technic. The belief that these cases are closely related to essential thrombopenia and do not form a separate disease entity is considerably strengthened by a report of Krömeke.[13] He has described a grandmother, her three daughters and two grandchildren, all with typical purpura hemorrhagica but with great differences in the platelet counts. The grandmother had a definite thrombopenia (28,000); one of her daughters and one grandchild had a moderate reduction of platelets (110,200 and 109,300); another daughter and grandchild had normal counts (228,000 and 234,000, respectively). This series forms an important link between essential thrombopenia and so-called thrombasthenia and points to a common etiologic factor which is not a mere numerical reduction in the number of circulating platelets.

Little can be said concerning the treatment employed in the various cases. Blood transfusion has proved of great aid in tiding the patient over the severe attacks of bleeding. Little and Ayres felt that roentgen irradiation of the liver and spleen was of value, but the evidence is not conclusive. The bleeding from the nose greatly diminished in those patients whose tonsillar tissue was cauterized or removed. Splenectomy is probably not indicated, although it is far too early to attempt to settle this much mooted question. It is encouraging that most of these patients stand operative procedures extremely well and that with advancing age there is a tendency toward natural improvement.

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12. Frank, E.: Die haemorrhagischen Diathese, in Schittenhelm's Die Krankenheiten des Blutes und der Blutbildenden Organe, Berlin, Julius Springer **2**: 289, 1925.
13. Krömeke, F.: Zur Frage der hereditären haemorrhagischen Diathese (Thrombasthenie), Deutsche med. Wchnschr. **48**: 1102 (Aug. 18) 1922.

Senior Students and Medical Economics.—For over twenty years, in season and out, I have advocated the need of instruction to all senior students of our medical colleges on the problems of medical economics and this for two reasons—first, in order that they may serve society better, and, second, in order that they may themselves prosper economically. Such a course of instruction, in order to serve its purpose, must fulfil both of these requirements. Dr. Donham of the Harvard Graduate School of Business Administration expressed the purpose of that school in the following terms: "The school is attempting to teach men to work out their own business relations in ways which contribute to social progress." Medical students need such a course of instruction much more than do business executives.—Ochsner, E. H.: Some Medical Economic Fundamentals, *J. Indiana M. A.*, June 15, 1929.

VISCEROPTOSIS *

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Descriptive anatomies have been the source of the misinformation that a theoretically normal body exists in which a definite type and relationship of organs are found and deviations from which have been described in footnotes as anomalies or abnormalities. Until comparatively recent years, students have attempted to find in the living the same topographic relationships as were found in the cadaver. The bodies used as the basis for descriptive anatomic studies were usually well developed, muscular ones which, in a measure, fitted in with the types previously described. Professors of anatomy require clear-cut anatomic material to serve best for their lectures and illustrations.

The necessity for recognition of various normal types of the genus *Homo*, each differing from the other in certain major features, is now quite apparent.

The use of the x-rays in studying the skeleton, body cavities, viscera, positions and organic relationships has revealed many marked deviations from the previously described anatomically normal. Mills [1] defines nature as "an infinite number of variations."

Radiology has opened up a new chapter in the history of man's study of man. It is giving us a mass of information, not yet correlated, from which will finally be deduced the specifications of certain broad, general types of bodies which may be looked on as normal. This is important. Lack of appreciation of the differences that exist between these normal groups of physiques is the basis for numerous grotesque therapeutic measures that habitually fail.

In 1917, Mills [1] submitted a classification of body types which may with profit be kept in mind when dealing clinically with aberrations in posture, visceral position and tone with their attendant train of symptoms.

As dominant types Mills describes the hypersthenic group, characterized by a large body, short thorax, long abdomen, extensive breadth of chest and upper part of the abdomen, with a relatively small pelvis well padded with fat; and the asthenic group characterized by frailty of build, long, narrow, shallow thorax, with a short, thin abdomen and relatively wide and capacious pelvis.

To the hypersthenic and asthenic groups, Mills added the sthenic and hyposthenic subdivisions. In each of these there is a fairly constant relationship between the body habitus and the visceral form, position, tone and motility. A thorax or abdomen with definite limitations can, of necessity, house organs only of certain form.

Pathologic conditions may result in gross abnormality in the form and position of viscera; and lesser degrees of pathologic conditions may result in commensurably smaller variations in visceral topography. Unless some standard of values is recognized, it is impossible to determine the abnormal. Before assuming such a condition as visceroptosis, it is obviously necessary to study large numbers of subjects; this is being carried on in several clinics at the present time. Meanwhile, in the pursuit of this information, numerous suggestive features stand out. The stomach of the hypersthenic and sthenic person is found fluoroscopically to lie well

* From the Lankenau Hospital Medical Clinic.
1. Mills, R. W.: Relation of Bodily Habitus to Visceral Form, Tonus and Motility, Am. J. Roentgenol. **9**: 155 (April) 1917.

up under the ribs; in fact, all of the organs are high, whereas in the hyposthenic and asthenic types the viscera are in lower position and may be found in the upper pelvis.

The tone and motility of the former are always greater than in the latter groups.

The diagnosis of a prolapsed organ cannot be made with any degree of accuracy before the type of body habitus is considered. Thus, in a hypersthenic person, a hypotonic and dilated stomach with the lowermost point of the greater curvature located in the upper pelvis may be designated as a stomach below par for that individual and likely to contribute its share in the production of dyspepsia. Studies of the asthenic type confirm the belief that only with an extreme degree of atony and the greater curvature deep in the pelvis is a diagnosis of elongated stomach permissible. With these basic rules of diagnosis in mind, and admitted to be only arbitrary, a further and valuable diagnostic procedure, fool-proof in a way, is the therapeutic test.

In a given individual, the abdominal organs are maintained in position by:

1. Mesenteric and ligamentous attachments.
2. Intra-abdominal fat.
3. Intra-abdominal pressure.
4. Tonus of the voluntary and involuntary musculatures.
5. The shape of the abdominal cavity.

1. The fundamental importance of the mesentery is rarely emphasized. Through it pass the nerves, blood vessels and lymph vessels to the gastro-intestinal tract. The mesentery probably plays only an inferior rôle in bearing the direct weight of the bowel but, on tension, reflex stimulation of the efferent nerves produces an increase in the tonicity of the external abdominal musculature, which assists in retaining the integrity of the visceral positions. Fixed points of the gastro-intestinal tract exist at the diaphragm, second portion of the duodenum, and the ascending and descending colon by ligamentous and mesenteric attachments. Incomplete development, usually of the right colonic fusion, may facilitate excessive mobility. Abnormal bands or adhesions due, in some instances, to over development may cause stasis with subsequent distention of the large bowel.

2. Intra-abdominal fat acts as a cushion for the viscera, reinforces the mesentery, and effectively protects the mesenteric vessels; it accentuates the lumbar anterior curve of the spine and, by generous deposits in the pelvis, diminishes the capacity of the lower portion of the abdomen. If the fatty tissue is absorbed and the patient loses weight, a general sagging of all the abdominal viscera takes place.

3. The intra-abdominal pressure may be conceived as a negative force existing between a recoiling tube within an osseomuscular chamber. It may be influenced by

(*a*) the size of the tube, regulated by its peristalsis, muscular tone and contents;

(*b*) the tonicity of abdominal musculature, and

(*c*) probably also by the intestinal gases as well as by the atmospheric pressure.

4. Tonus of the voluntary and involuntary muscles is important to optimal function of the viscera. Relaxation of the external muscles leads to a general sagging of the abdominal organs. On stimulation of the pacinian corpuscles, nerve end-organs in the mesentery, by increase in tension on the mesentery, a reflex is set up—the muscular mesenteric reflex—which causes the external voluntary muscles to contract and thereby relieve the tension on the mesentery, a condition produced by changing from the prone to the upright posture. Loss of tone of the involuntary musculature of the bowel from stasis, debilitating diseases, pregnancy or fatigue accounts for the elongation of the gastric outline and dilated large bowel seen fluoroscopically.

5. The shape of the abdominal cavity determines the limits of the various visceral positions. In the hypersthenic body type the upper part of the abdomen is capacious and the diaphragm is high; the lumbar vertebral prominence is marked and the pelvis is relatively small. The asthenic body type has a cramped upper portion of the abdomen with less prominence of the lumbar vertebra, and the pelvis is large. The axis of the upper part of the abdomen, in the hypersthenic type, forms approximately a right angle with the axis of the pelvis. In the asthenic type this angle is obtuse. It is, therefore, obvious that the limitations of the body cavity must be kept in mind when visceral locations are considered abnormal.

Ptosis of one or more abdominal viscera is a common finding in clinical experience. Three classes of patients exist: (1) those with ptosis and no symptoms; (2) those with ptosis in which symptoms are caused by another condition, and (3) those with ptosis and symptoms due to ptosis. Textbooks have described the hereditary and acquired cases, the former being an asthenic habitus, the latter following prolonged disease, pregnancy or inanition.

In 100 cases now under observation in the Lankenau Medical Clinic, twenty-seven were classed as congenital and seventy-three as acquired cases of ptosis.

The organs involved were: stomach 91 per cent, transverse colon 88 per cent, right kidney 3 per cent, left kidney 1 per cent, and liver 2 per cent of the 100 cases. The age incidence is given in the accompanying table.

Age Incidence in a Series of One Hundred Cases

Years	Number of Cases
From 10 to 20	4
From 20 to 30	32
From 30 to 40	16
From 40 to 50	24
From 50 to 60	20
60	4

Thirty-two males and sixty-eight females were studied. The complaints of these patients refer principally to the gastrointestinal tract. The majority had been previously diagnosed as "neurasthenic." Consideration of the ptosis did not come up until all of the usual "symptomatic" and "empiric" therapeutic measures had failed to relieve. Forty-six patients bore operative scars previous to our study.

Examination revealed that 69 per cent were undernourished and 15 per cent were overweight; forty cases showed an erythrocyte count below four million; twenty-two cases exhibited hypotension and in twelve the blood pressure was elevated; sixty-two cases showed hypo-acidity and eighteen cases hyperacidity of the gastric secretion as found by the two-hour fractional meal.

Eighty-three patients complained of constipation and in all of these the colon was found, fluoroscopically, to be deep in the pelvis. A mobile cecum was noted in eighty-two cases.

The gastric wall was hypotonic in thirty-three and hypertonic in five cases. Enlargement of the thyroid gland existed in nineteen patients, and eight showed evidence of arthritic changes.

It is not our thesis to prove that visceroptosis is the underlying cause of these multitudinous conditions. Ptosis is not a disease, but it may result from a debilitating illness. In certain cases it may be regarded as an index of the functional ability of the gastro-intestinal tract. It is not to be denied that patients are seen who possess a marked prolapse of the stomach, transverse colon or right kidney, but whose complaints are not directly related to those organs. It is our belief that the best therapeutic result will be obtained only if the physician in charge will attempt to return these viscera to their best functional position, at the same time that the principal lesion, infection or intoxication is being eradicated. Too often the ptosis is disregarded. The patient becomes a chronic complainer, or has been one for an extended period of time.

Five years ago a middle aged, unmarried, tall, well built, muscular woman walked into the Lankenau Hospital and applied for relief from sick headaches, indigestion, gaseous eructations, constipation and fainting spells from which she had occasionally collapsed. Her further statements revealed that she had made the rounds, so to speak, of doctors' offices and tried numberless remedies without relief, the symptoms meanwhile becoming more severe. Examination of the patient revealed a moderately relaxed abdominal wall, not at all of an advanced degree. Fluoroscopically the stomach showed an atonic wall with the lower border of the greater curvature 3 cm. below the level of the anterior superior spine, and the transverse colon lay in the pelvis. At the time no attention was directed to the vertical elongation and relaxation of the gastric wall or the malposition of the colon. Numerous tonics, sedatives and injections were tried, all without avail. The patient continued to have indigestion and weak spells. Complete reorganization of the treatment was indicative. On surveying the observations made of the case once more it was decided to apply an abdominal support, order abdominal massage with elevation of the foot of the bed, and the patient was given a special diet and requested to lie down for approximately forty-five minutes after each meal. Promptly on institution of this regimen the symptoms disappeared and within two months the patient was in better health and spirits than at any time during the preceding three years.

I cite this case as an example of a large group of persons suffering from a functional disturbance of the gastro-intestinal tract which is characterized by atony and lengthening of the gastric wall with or without coloptosis. The case is stated in such terms because relief of symptoms is unlikely to result if the stomach and colon are not retained in a position compatible with their optimal function.

Much has been written pro and con concerning downward displacement of the various abdominal viscera. It is generally accepted that a so-called visceroptotic habitus or "maladie constitutionelle" exists. In our experience, numerous patients in whom an elongated stomach or dropped colon exists would not ordinarily be placed in such a category.

A certain confusion and uncertainty appears to exist with regard to descriptive terms used in reference to the condition at hand. Ptosis indicates prolapse or downward displacement of an organ; the liver, kidneys, spleen, transverse colon or stomach may one or all be fallen. There is an important point of difference regarding the stomach compared with the other viscera. Except for the colon, the other organs are solid. The stomach is a muscular tube capable of distention or contraction. Gastroptosis, as such, is rarely if ever present; that is to say, this distensible tube is permanently fixed at two points; namely, at the cardia, where it is maintained by ligaments and the diaphragm, and at the fixed second part of the duodenum. Gastroptosis is, in truth, a sagging of the antrum and pylorus, which, in extreme cases, may extend downward into the pelvis. At the same time there is hypotonicity of the muscular gastric wall, as readily seen fluoroscopically. This diminution of tone is, to my mind, important in the production of symptoms.

DIAGNOSIS

Ptosis of one or more abdominal viscera is easy to diagnose. The outstanding event in the history appears to be the failure of all therapeutic measures previously tried and the number of times the patient has been pronounced "nervous." Not infrequently, operative scars are found. Prolapse of viscera may occur in the sthenic or hypersthenic habitus, but more frequently is found in patients with the characteristic hyposthenic or asthenic constitution.

TREATMENT

Treatment should be directed toward eradication of all foci of infection, return of the prolapsed organs to their optimal functioning location, and a general toning up of the entire body musculature.

Elimination through the bowels, kidneys, skin and lungs is indicated.

Rest is essential. In the upright posture, tension on the mesentery occurs in these patients. This is relieved on lying down; therefore, it is prudent to advise rest following each meal.

At no time should the stomach be required to entertain a large meal. Accordingly, four, five or even six feedings, each small in amount, are found to facilitate digestion and are always more kindly received. Fluids are taken only between meals.

Massage of the abdominal muscles with daily exercises to strengthen them is important in retoning the patient.

Medicines play a minor rôle in treatment. An irritable pylorus is relaxed by small quantities of belladonna, a sensitive gastric mucosa is allayed by the alkalis; malt and cod liver oil contribute splendidly to upbuilding, and the sedatives of bromide and phenobarbital quiet injured nerves.

Abdominal supports are useful and often uncomfortable. The majority of belts have been found to be totally incompetent. The proper support should be fairly comfortable and at the same time lift the prolapsed viscus to its proper position. It must be easily applied. In our experience the Page support, consisting of a firm oval leather pad held over the pubic region by a curved rod passing posteriorly over each iliac crest and connected to a back-brace consisting of two short vertical rods, has proved satisfactory. It is wise to check up the position of the stomach and transverse colon at frequent intervals, following barium ingestion with the belt in position. Minor adjustments are often necessary. As soon as the tone of the voluntary and involuntary musculature is sufficiently improved, the stiff belt should make way for an elastic

and inconsequential binder so that there may be no pressure atrophy from the Page support.

In approximately 5 per cent of patients, adhesions bind the viscera in their malposition so that operation must be considered. Likewise, incomplete fusion of the right colon with subsequent gross prolapse may finally warrant surgical intervention. It might be wise to emphasize that visceroptosis should always be considered before, and not after, surgical measures.

In our series of 100 patients, eighty-two improved under treatment. Of the remaining eighteen patients, two were afflicted with pulmonary tuberculosis, four with heart disease, three with nephritis, and one with thyroid disease; five had some form of pelvic disorder.

This investigation and survey was considered advisable for the reason that visceroptosis is commonly found and many physicians maintain that it is of no clinical significance. I believe that the therapeutic test disproves this assumption. I would recommend a reexamination of every patient looked on as a chronic complainer, in whose behalf the diagnosis of some form of ptosis had not hitherto been considered.

THE EFFECTS ON HUMAN BEINGS OF A TWELVE MONTHS' EXCLUSIVE MEAT DIET

BASED ON INTENSIVE CLINICAL AND LABORATORY STUDIES ON TWO ARCTIC EXPLORERS LIVING UNDER AVERAGE CONDITIONS IN A NEW YORK CLIMATE *

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The question of minimal and optimal protein requirements has received considerable research attention in recent years. There is now very little disagreement among students of nutrition as to what these requirements are. On the effects of a high protein dietary, however, not only do opinions of authorities differ but the results of carefully controlled experiments show considerable variance. It is a traditional belief that a high protein intake leads to high blood pressure, arteriosclerosis or nephritis. Among physicians it has almost become a dietetic dogma to reduce or eliminate entirely the intake of meat whenever diets are prescribed. Unless proper interpretation is given to certain present-day investigations on protein metabolism, including the results of the experiment reviewed in this paper, there is danger that the dietetic pendulum will swing too far in the opposite direction.

The Eskimos have lived on a high protein dietary as far back as records go. Thomas, who recently made a careful study of their health status, found very little evidence to indicate that hypertension or nephritis was more prevalent among Eskimos than among low protein feeders. Several years ago it was my privilege to make an exhaustive clinical survey of Vilhjalmur Stefansson, the arctic explorer who had lived for seven years on an exclusive meat diet. The result of this study indicated that such a dietary had left no physical or clinically proved stigmas, and that while Stefansson was living on nothing but meat and fish (including fat) his health was at its maximum.

The data presented quite naturally gave a jolt to our accepted ideas of protein metabolism. Some of the critics maintained that the arctic cold was responsible for this high protein and fat tolerance; others that it was due to vigorous exercise in the open air. As a matter of fact, summer heat comparable to our own was experienced for a part of each year in the arctic circle and, since practically a tropical temperature exists in the houses and beneath the fur clothing, this explanation was untenable. Exercise likewise was not a factor, since the exclusive meat diet worked just as well during months of sedentary existence.

In order to answer some of the queries which Stefansson's experience provoked and to throw additional light light on the effects of an exclusive meat diet, Stefansson and Andersen (who spent three years with him in the arctic) consented to go on an exclusive meat diet for a year and to be intensively studied from every clinical angle.

The studies which this paper capitulates have just been completed. Monographs [1] detailing the results of these investigations, including basal metabolism, chemical analysis of the blood and urine and fecal bacteriology, are appearing under the names of the respective investigators.

DETAILS OF INVESTIGATION

This research extended over a period of twelve consecutive months and was divided in point of time, location and experimental subjects as follows:

1. STEFANSSON.—The studies on Stefansson at the Russell Sage Institute of Pathology at Bellevue started, Feb. 13, 1928. From that date to February 26 he came to the hospital for all meals but he did not stay at the hospital continuously until February 26. After the completion of preliminary studies he was placed on an exclusive meat diet on February 28, and for two months intensive metabolic and laboratory studies were made on him. Then, for a period of ten months he was at large attending to his affairs but reported once each month for clinical and laboratory check ups. The concluding meat diet studies lasted one week. Dietary control was supervised in his home and he reported to the hospital for metabolism and blood studies. He was under observation for two weeks following the completion of the meat diet. His meat diet experiment ended March 8, 1929.

Dietary Notes.—After preliminary studies on a mixed diet Stefansson was put on an exclusive lean meat diet for the purpose of studying the effects of an excessively high protein, minimal fat dietary. Stefansson predicted that he would be ill in a few days, judging by his past experience in the arctic, and such proved to be the case. Although this experiment was planned for but four days, in the evening of the second day he became nauseated and developed some of the discomfort, lethargy and weakness of the knees which he experienced on an enforced lean meat diet in the North. The next day all the symptoms became intensified and diarrhea developed. This part of the experiment was, of course, stopped and by adding fat in tasteful quantities he fully recovered within two days. He lost

* This work was done under the direction of a committee of scientists under the chairmanship of Dr. Raymond Pearl of Johns Hopkins University, from contributions made by the American Institute of Meat Packers.

1. Two short articles on the metabolic results have already been published: McClellan, W. S.; Spencer, H. J.; Falk, E. A., and Du Bois, E. F.: Clinical Calorimetry. XLIII: A Comparison of the Thresholds of Ketosis in Diabetes, Epilepsy and Obesity, J. Biol. Chem. **80**: 639 (Dec.) 1928. McClellan, W. S., and Toscani, Vincent: Clinical Calorimetry. XLIV: Changes in the Rate of Excretion of Acetone Bodies During the Twenty-Four Hours, ibid. **80**: 653 (Dec.) 1928. Lieb, C. W., and Tolstoi, Edward: Effects of an Exclusive Meat Diet on Chemical Constituents of the Blood: Proc. Soc. Exper. Biol. & Med. **26**: 324-325, 1929. The following articles are in the course of preparation: McClellan, W. S., and Rupp, V. R.: Note on the Efficiency of Absorption from the Intestinal Tract with Meat Diets. Rupp, V. R.; Toscani, Vincent; and McClellan, W. S.: Nitrogen, Calcium and Phosphorus Balances of Two Men on an All Meat Diet. Rupp, V. R.: Analyses of Meat, Nitrogen, Fat, Calcium and Phosphorus. The reports of the basal metabolism of the specific dynamic action of foods will be made by Drs. McClellan, Spencer and Falk. Certain phases of the blood chemistry and the response to the injection of dextrose will be published by Dr. Edward Tolstoi. Dr. John C. Torrey and Dr. C. W. Lieb will report on the studies of the intestinal flora.

2 Kg. in the first ten days. Following the acute enteritis just described he developed a stubborn constipation coincident with a craving for special foods, particularly calves' brains (10 per cent ether soluble substance) and bacon. He ate heartily of this combination for several meals, but this overcompensatory diet resulted in two days of nausea and severe diarrhea. By adjustment of the lean-fat ratio a normal gastro-intestinal state returned, and no other diet complications developed during the year's experiment.

2. ANDERSEN.—Preliminary studies were made on Andersen from Jan. 6, 1928, when he entered the hospital, up to January 25. He then left the hospital for eight months, reporting at monthly intervals for clinical and laboratory surveys. Concluding meat diet observations lasted three weeks in the hospital and he was under observation for two months following the conclusion of the meat regimen.

Dietary Notes.—Andersen did not suffer such digestive upsets as Stefansson, mainly because no all-lean meat (high protein) observations were made on him. Andersen lost weight steadily while on the mixed diet from the day he entered the hospital (60 Kg.) and continued to lose during the first week he was on the exclusive meat diet (57.8 Kg.). He then began to gain weight steadily and within sixty days after the start of the experiment his weight was 60.5 Kg., thus exceeding his initial weight by 0.5 Kg. His weight fluctuated slightly during the interhospitalization period, being 58.4 Kg. at the beginning of the concluding calorimetric studies. Andersen ended his continuous meat diet, Jan. 24, 1929. From then to January 31, inclusive, he was placed on a high fat diet with moderate protein. From February 1 to February 7, inclusive, he was on the same diet plus 35 Gm. of carbohydrate in the form of thrice cooked cabbage. From February 8 to February 14 he was on the regular exclusive meat diet. During these periods he was studied intensively from the clinical, laboratory and calorimetric standpoint.

February 13, he developed a slight cold. He had a dextrose tolerance test on February 15 after which he was supposed to go on his general mixed diet. In the evening of this day he developed a chill, with rise of temperature. The next day he developed signs of a lobar pneumonia of the right lower lobe with a temperature of 104 F. and a rusty sputum. This proved to be type II pneumonia. Dr. Felton's concentrated polyvalent pneumonia serum was then intensively given with an immediate drop in temperature, which reached normal within a few days. Andersen made an uneventful convalescence. Aside from signs of acute intoxication on the fourth day of the disease he showed very little of the toxic symptoms of other patients in the hospital at this time with type II infections. While Andersen was in the hospital there were many cases of type II pneumonia in the wards and his was possibly a case of cross-infection. When one considers that approximately 50 per cent of these patients died, it is noteworthy that he survived. It may be of interest to know that Andersen, during his seven years' residence in Florida, has had a low resistance to head colds, having a succession of them each winter. He had only one cold during the past year and that was caught during an epidemic of grip in the hospital seventy days after he started on the meat diet. He had a very mild attack and only through the insistence of his physician did he go to bed, where he remained but two days. His physician caught the grip at the same time and was confined to bed ten days with a very severe attack. Though this clinical incident does not prove anything, it is at least an interesting fact that, in two subjects contracting grip at the same time and apparently from the same source, the resistance of the one on the exclusive meat diet should apparently exceed that of the subject on the mixed diet.

Stefansson, while traveling through the Middle West this winter, contracted a very mild and short attack of grip in a community where the grip was very severe and the mortality great. Of like interest in connection with the subject of resistance and diet is the experience of Stefansson during his explorations in the Far North. Having contracted a severe case of typhoid in the arctic in a region remote from medical help and where he was forced by circumstances to eat nothing but canned food, his case was given up as practically hopeless. Stefansson, however, while in the third week of his typhoid, demanded that he be taken by sleigh to a hospital 140 miles distant. En route he ate nothing but raw fish. He reached the hospital in two weeks fully recovered from his typhoid and with a gain of 20 pounds (9 Kg.) in weight.

These citations are not made for the purpose of proving the resistance-promoting merits of an exclusive meat diet but merely as interesting clinical observations in a field of knowledge demanding exhaustive research and a judicious appraisal of facts and theories.

CLINICAL SUMMARY

Weight.—Stefansson lost 2.5 Kg. during his year on the exclusive meat diet. Some of this loss he considered excessive weight. Andersen lost 3 Kg. up to his attack of pneumonia.

Caloric Intake.—Stefansson averaged about 2,650 calories a day, 2,100 calories consisting of fat and 550 of protein. Andersen averaged about 2,620 calories a day, 2,110 calories consisting of fat and 510 of protein. Carbohydrate in the meat varied between 20 and 50 calories a day.

Blood Pressure.—Stefansson maintained a blood pressure of 105 systolic and 70 diastolic during the entire course of his diet. Andersen's blood pressure was 140 systolic and 80 diastolic at the beginning of the diet and 120 systolic and 80 diastolic on the completion of the year's diet.

Vitality.—In neither subject was there a decrease in physical vigor. Both led sedentary lives throughout the experiment. No subjective nor objective signs or symptoms of a decrease in physical vigor was observed. The same holds true of their mental vigor.

Heat Tolerance.—Andersen affirms that he endured last summer's heat, if anything, better than during former years.

Appearance.—Both men appeared ruddier at the end of the experiment than at the beginning.

Hair.—Andersen noted that his hair stopped falling out shortly after the meat diet was started and that the progressive loss has been checked up to date.

Teeth.—In neither case has there been any deterioration of the teeth. The dentist who has watched these two subjects throughout the experiment noted a greatly increased deposition of tartar on Stefansson's teeth while on the meat diet than formerly. This is interesting in view of the low calcium content of meat. There was also a notable absence of pyorrhea in both subjects.

Bowels.—Andersen's bowels have remained normal throughout the diet regimen and required practically no catharsis. Stefansson, who has had a tendency to constipation while living in civilized communities, found no increase in this tendency while on the meat diet. An interesting point in this connection is that in both these men the stools were nonodorous and there was no evidence of gaseous distention or flatus at any time. The stools were somewhat below average size and usually formed.

Pulse, Temperature and Sleep.—There was no variation from the normal and usual.

COMMENT ON DIET

Of interest in this dietary regimen was the apparent absence of monotony; the subjects rarely craved for other food than meat products. What little calcium

they had was obtained from eating the ends of ribs and gristle, averaging about 0.1 Gm. a day. The average water which they drank contained 0.01 Gm. of calcium per liter. Most of the meat eaten was cold storage meat. For a period of two months in the early part of their regimen they had freshly killed meat. During the remainder of the experiment their meat was ordinary, refrigerated, butchers' meat. The meat was usually boiled or stewed, the inside being left rare. Raw bone marrow was eaten as dessert at times early in the experiment but never during the last six months of it. Very little salt was added to the food by Andersen. No eggs were taken by Andersen during the year. Stefansson sometimes used them on journeys when meat was not available. Neither milk nor its products were used. Coffee and black tea and water were the sole beverages and, of course, unsweetened. About 1,500 to 1,800 cc. of fluid was consumed a day. Usually four meals were taken by Stefansson but three by Andersen each day. The food was always relished and complete satiety resulted after eating. No headaches or digestive symptoms, other than those noted as the result of eating lean meat, were experienced. Both these men were ideal experimental subjects and science owes much to them for their whole-hearted cooperation in enduring so patiently the numerous annoyances incident to the complicated and frequent tests made on them. They were psychologically fit for the experiment since, having had years of experience in living on this diet, they had no mental hazards as to its course or outcome.

The diets on which these two experimental subjects have been for the past year have not been particularly high protein diets, being but 30 or 40 per cent above the average protein intake. Their protein intake amounted to between 100 and 140 Gm. a day. The remaining calories were derived from fat which was equal to about three fourths or four fifths of their caloric intake. Andersen showed little evidence of an adaptation to the utilization of the higher percentages of fat. Stefansson appeared to develop an increased utilization to the high percentages of fat. The highest ketosis noted was in Andersen, the subject who weighed least. Stefansson, who is a better nourished type, tolerated the fat better than Andersen.

MISCELLANEOUS DATA

Metabolism.—The basal metabolism of these subjects showed a uniform variation between minus 10 and minus 20 per cent by the Aub-Du Bois standards. There was a slight rise in metabolic rate of 5 per cent during the first month. It is therefore noted that meat diets do not produce any striking elevation of metabolism.

Weights.—Andersen weighed 60 Kg. at the start. At the end of one month he weighed 58.5 Kg.; at the end of the second month he weighed 60.5 Kg.; at the end of the year's meat diet, 58 Kg.; after recovery from pneumonia 57 Kg., and at this writing, three weeks after recovery from pneumonia, he has regained his original weight.

Stefansson's original weight was 72.5 Kg. At the end of the first month it was 68 Kg.; at the end of the second month it was 69, and at the end of the year's meat diet 69.4 Kg. From April, 1928, to March, 1929, there was no change in weight. Stefansson's concluding weight after the calorimeter studies had been completed was 69.7 Kg.

Effects on Kidneys.—1. No albumin, casts or blood was found at any time during the course of the experiment.

2. A red test on Andersen showed 55 per cent excretion at the beginning of the experiment; 62 per cent after recovery from pneumonia after completion of a year's meat diet. (The red test was not carried out on Stefansson.)

3. Urea clearance showed 100 per cent plus.

These tests would indicate an ability on the part of the kidneys to hyperfunction while on a meat diet.

4. Roentgen examination of the kidneys before and at the conclusion of the meat diet did not show any change in size.

Mineral Metabolism.—As Aub's work indicated that an acid diet increases calcium excretion and calcium drainage, one would suspect that subjects on a meat diet, which is an acid diet and is likewise low in calcium, would in a year show a calcium deficiency. The increased amount of tartar on Stefansson's teeth and the lack of evidence of lowered blood calcium offers an interesting field for speculation. There was no decreased density in roentgenograms of the hands at the end of the experiment when compared with the hand of a man on a general diet.

Chemical Analysis of the Blood.—The chemical composition of the blood was little affected except for a slight increase in uric acid and a temporary lipemia. The latter occurred only after unusual amounts of fat were taken. Nonprotein nitrogen, urea, uric acid, creatinine, sodium chloride, sugar, carbon dioxide combining power, serum calcium, plasma protein albumin (plasma), globulins, total protein (plasma) albumin : globulin ratio, and cholesterol were studied before the meat diet and after an exclusive meat diet for twelve months, and no noteworthy changes were discovered. Of interest was the fact that the dextrose tolerance test, consisting of the ingestion of 100 Gm. of dextrose, developed in Andersen a typical diabetic curve resulting in the spilling of sugar for the two following days.

Observations on Intestinal Flora (by Dr. John C. Torrey.)—No blood appeared in the fecal specimens and rarely any mucus, the latter occuring once in the case of Andersen and twice in that of Stefansson. The stool reactions were generally definitely acid—between p_H 6.0 and 6.8—with an inoffensive, slightly acid odor.

The whole meat diet in both subjects caused a simplification of the intestinal flora with a marked reduction both in types and in total numbers of bacteria. The acidophilus, enterococcus and streptococcus types were practically eliminated. The *B. coli* group increased greatly numerically at first but later decreased and for a time in one subject (Andersen) were largely replaced by *B. proteus*. Hemolytic *B. coli* increased in both during the first one to three weeks, then disappeared. No increase in virulence of colon strains occurred. *B. welchii* at the start was present in both subjects in higher counts than usual for normals, and during the first period a great increase occurred. Later the count fluctuated but was generally high. There were very few putrefactive spore-bearing anaerobes at any time. The diet did not appear to introduce them or encourage their growth.

This meat diet did not cause the development of a putrefactive flora in Stefansson and in Andersen only so far as the late appearance of *B. proteus* (noted first after about one year on the diet).

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NEPHROSIS: A CRITIQUE *

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Twenty-four years ago Friedrich Müller [1] suggested the word "nephrosis" as a term for renal degenerative changes in contrast to "nephritis," which he limited to inflammatory and proliferative lesions of the kidney. Since then there has been an active discussion among pathologists as to how far degenerative lesions should be regarded as part of the inflammatory process, defining inflammation as the reaction of tissues to injury of various sorts, chemical, physical and bacterial. This discussion continues, and some pathologists use "nephritis" to include various renal lesions in very large measure, if not entirely, degenerative in character, while others, at present the larger group, distinguish between nephritis and nephrosis as did Friedrich Müller, and some even speak of such various forms of nephrosis as simple nephrosis, febrile nephrosis, necrotic or necrotizing nephrosis, sublimate nephrosis, barbital nephrosis, arsphenamine nephrosis, fat nephrosis, lipemic nephrosis, lipoid nephrosis, syphilitic nephrosis, nephrosis of pregnancy, amyloid nephrosis, diabetic nephrosis, cholemic nephrosis and hemoglobin nephrosis. The use of the term nephrosis to indicate degenerative renal lesions seems to have played a useful part in pathology as a descriptive term, but just the best way to fit it into the concept of Bright's disease or chronic nephritis (there is no other satisfactory term, if "nephrosis" is accepted, unless one says "nephritis and nephrosis") remains undecided, though it is recognized that there are renal lesions essentially degenerative in nature, entirely different from what is seen in glomerular or other types of nephritis or as a result of various known poisons and toxins. It is this sort of a lesion that the pathologist finds usually associated with what many clinicians call nephrosis.

Beginning about a decade and a half ago there has been an increasing utilization of the word "nephrosis" for a condition presented by a well defined clinical group of patients, and to this term have been added various modifying adjectives, such as true, genuine, lipoid and chronic. This form of nephrosis is described as having the following important features: insidious onset, marked edema, decreased basal metabolism, oliguria, marked albuminuria, decreased blood proteins with relative increase in globulin reversing the usual albumin: globulin ratio, lipoidemia (hypercholesteremia), good phenolsulphonphthalein excretion, no increase in nonprotein nitrogen of blood, cylindruria but no hematuria, doubly refractile lipoid droplets in urine, and normal blood pressure. Our present knowledge of this clinical syndrome is largely the result of the work of Munk,[2] Volhard,[3] Fahr,[4] Epstein,[5] Govaerts [6] and others. The condition occurs both in children and in adults. A number of observers regard this clinical syndrome as a general metabolic disturbance rather than essentially a disease of the kidney analogous to chronic nephritis or Bright's disease and have expressed this idea by the use of such terms as diabeticus albuminuricus (Epstein [5]), lipogelose (Kollert [7]), diabetes lipoid-proteinicus (Löwenthal [8]), physicochemical modification of body colloids (Munk [2]).

If one turns to the literature, one finds that the support for this description of nephrosis is in very large part clinical. Reports of cases, grouped clinically as nephrosis, followed through to death with postmortem study of the kidneys, are relatively few. That there are patients with the clinical syndrome of nephrosis no one can doubt, though they make up a relatively small percentage of patients with renal disease. Just how they progress is not so certain. Some die after a relatively short period of disease, usually as the result of infection and predominatingly pneumococcus infection. Such cases in adults are reported by:

Volhard and Fahr,[9] 1914: 1. A boy, aged 15 years; duration, fifteen months; appendicitis followed by pneumococcus peritonitis. 2. A man, aged 22; duration, seventeen months; pneumococcus peritonitis and bronchopneumonia. 3. A girl, aged 15 years; duration not very clearly stated, probably about two months; pulmonary tuberculosis and pneumococcus peritonitis (kidneys showed amyloid with glomerular lesions).

Bock and Mayer,[10] 1920: A woman, aged 43; duration, three months; pneumococcus peritonitis.

Vandorfy,[11] 1921: A man, aged 24; duration, seven months; probably syphilitic; pneumococcus peritonitis.

Stotz,[12] 1922: A man, aged 51; starvation edema during war; one and one-half years later, onset of nephrosis; duration, five months; pneumococcus pleurisy.

McNee,[13] 1922: 1. A woman, duration, fifteen months (glomeruli described as intracapillary glomerulitis). 2. A woman, aged 39; duration, nine months; acute pelvic inflammation (glomeruli as in his first case and fair degree of interstitial tissue proliferation).

Fahr,[14] 1925: 1. A youth, aged 19; duration, six weeks (possibly of syphilitic origin); empyema. 2. A woman, aged 38; duration, ten months; lung abscess. (Fahr described degenerative (1) and hyaline (2) lesions in glomeruli).

Major and Helwig,[15] 1925: A man, aged 34; duration, nine months (autopsy limited to removal of kidneys).

Eckstein,[16] 1926: A girl, aged 14 years; duration, five months; probably syphilitic; peritonitis with Gram + diplococci (kidney showed amyloid and beginning "Schrumpfniere").

Murphy and Warfield,[17] 1926: A man, aged 21; duration, sixteen months; apparently no terminal infection, but autopsy limited to small abdominal incision.

McElroy,[18] 1927: A youth, aged 17; duration, thirteen months, tonsillitis.

Govaerts and Cordier,[19] 1928: A woman, aged 22; duration, about twelve months; pneumococcus in blood culture, pulmonary thrombosis. (Glomeruli larger than normal with nuclear

* Read before the Association of American Physicians, Atlantic City, N. J., May 7, 1929.

1. Müller, Friedrich: Verhandl. d. deutsch. path. Gesellsch., Meran, 1905.

2. Munk, F.: Ztschr. f. klin. Med. **78**: 1, 1913; Med. Klin. **12**: 1019 (Sept. 24), 1047 (Oct. 1), 1073 (Oct. 8) 1916; Virchows Arch. f. path. Anat. **226**: 81, 1919; Med. Klin. **21**: 184, 1925; Nieren-Erkrankungen, ed. 2, Berlin, Urban and Schwarzenberg, 1925.

3. Volhard: Die doppelseitigen hematogen Nierenerkrankungen, Berlin, Julius Springer, 1918.

4. Fahr: Deutsches Arch. f. klin. Med. **125**: 66, 1918; Virchows Arch. f. path. Anat. **239**: 32, 1922; chapter on Pathologic Anatomy of Morbus Brightii, page 176, subpart on Nephrosen, page 172, in Henke and Lubarsch: Handbuch der speziellen pathologischen Anatomie und Histologie, Berlin, Julius Springer, 1925.

5. Epstein, A. A.: Am. J. M. Sc. **154**: 638 (Nov.) 1917; Parenchymatous Nephritis, J. A. M. A. **69**: 444 (Aug. 11) 1917; Am. J. M. Sc. **163**: 167 (Feb.) 1922; Thyroid Therapy and Thyroid Tolerance in Chronic Nephrosis, J. A. M. A. **87**: 913 (Sept. 18) 1926; Arch. f. Verdauungskr. **44**: 31 (Aug.) 1928.

6. Govaerts, P.: Compt. rend. Soc. de biol. **89**: 678, 680, 1923; Bull. Acad. roy. de méd. de Belgique, 1924, p. 161; **8**: 33, 1928. Govaerts, P., and Cordier, R.: Ibid. **8**: 510, 1928.

7. Kollert, V.: Ztschr. f. klin. Med. **97**: 287 (Sept.) 1923; Klin. Wchnschr. **5**: 441 (March 12) 1926. Kollert, V., and Starlinger, W.: Ztschr. f. klin. Med. **104**: 44, 1926.

8. Löwenthal, K.: Beitr. z. path. Anat. u. z. allg. path. (Ziegler's) **79**: 497 (Feb. 15) 1928.

9. Volhard and Fahr: Die Brightsche Nierenkrankheiten, Berlin, Julius Springer, 1914, p. 96.

10. Bock and Mayer: Med. Klin. **16**: 101, 1920.

11. Vandorfy, J.: Med. Klin. **17**: 656 (May 29) 1921.

12. Stotz: Med. Klin. **18**: 1376, 1922.

13. McNee, J. W.: J. Path. & Bact. **25**: 425 (Oct.) 1922.

14. Fahr, in Henke and Lubarsch, Handbuch der speziellen pathologischen Anatomie und Histologie, Berlin, Julius Springer, 1925, p. 224.

15. Major, R. H., and Helwig, F. C.: Bull. Johns Hopkins Hosp. **36**: 260 (April) 1925.

16. Eckstein, A.: Klin. Wchnschr. **5**: 1787 (Sept. 17) 1926.

17. Murphy, F. D., and Warfield, L. M.: Lipoid Nephrosis, Arch. Int. Med. **38**: 449 (Oct.) 1926.

18. McElroy, J. B.: Nephroses, J. A. M. A. **89**: 940 (Sept. 17) 1927.

19. Govaerts and Cordier (footnote 6, third reference).

proliferation, leukocytes in capillary loops, interpreted as glomerulitis.)

Löwenthal,* 1928: 1. A woman, aged 29; duration, three months; blood culture, *B. pyocyaneus,* ulcerative colitis. 2. A man, aged 21; duration, four months; bronchitis, erysipelas. 3. A girl, aged 16; duration, from twelve to thirteen months; acute parotitis (drained). (In 1926 Löwenthal [20] also reported two cases in children, aged 8¼ and 4¼ years.)

Summarizing these, there have been reported eighteen adults with clinical course and postmortem renal observations consistent with the diagnosis of nephrosis. In these reports the average duration of the disease has been 8.8 months in these patients from onset of edema to death. In fifteen of the eighteen cases at the end there was evidence of acute infection, and of these, in eight there was infection with the pneumococcus. The average age was 25.7 years; the oldest, 51. Males and females were equally affected. In children, purposely omitted on account of my lack of experience with children and their diseases, except for age the reports seem to indicate a similar pathologic process with tendency to infection, often with the pneumococcus, as the immediate cause of death after a not long duration of illness. One wonders about these patients, just how much of the pathologic picture has been determined by the elements of bacterial infection, and what would have been the appearance had the disease not been terminated after so brief a course, brief in comparison with the majority of kidneys that we have for study from patients with chronic nephritis.

The cases just cited have furnished the opportunity for pathologic study of nephrosis, that term being used in its more narrow clinical sense. Besides these cases, surprisingly few in number when one considers the great interest in the subject, the larger majority of patients with nephrosis must have either recovered completely or progressed under some other clinical picture to an ultimate death, since so very few autopsies have been reported in the literature. Clinical reports indicate frequent recovery, but the literature is devoid of much in the way of follow-up of these cases in later years to see whether their apparent cure was complete or not. Some of these patients, after a varying time, die and show extensive amyloidosis. This happened in one of our patients, who clinically more than any other of our patients showed the features of nephrosis. There are reported also cases which do not heal but progress with a clinical picture shifting from that of nephrosis to subacute or chronic glomerular nephritis, and at death these show a more or less granular, definitely atrophied kidney (nephrotische Schrumpfniere). Mason [21] reports such a case and Volhard and Fahr [9] include two of them. This has happened in cases at our clinic.

Some authors describe in their cases of nephrosis definite glomerular lesions and believe that, even in these patients dying early with renal lesions essentially degenerative in nature, there are evidences of glomerular lesions similar to those found in the earlier stages of glomerular nephritis (Govaerts and Cordier, McNee, possibly McElroy). Then there are described mixed cases, in which clinically and pathologically there are evidences of both nephrosis and nephritis, cases which seem to progress along the lines of losing the clinical evidences of nephrosis and gaining more and more of the clinical features of glomerular nephritis. In my experience this is what usually happens. Many of the patients that progress with signs pointing to glomerular lesions give a history of onset indicative of an acute nephritis subsequent to some sort of an acute infection. Three patients with an early stage of hemorrhagic nephritis in our clinic have developed the nephrosis syndrome.

As one reviews the various reports of patients with the clinical syndrome of nephrosis, one gains the impression that two features are strikingly common to all of these patients in the earlier stages, edema and very marked albuminuria, and that the rest of the features of nephrosis come later. When the picture is fully developed, an almost constant feature is lowered blood protein, which is a reversal of the albumin: globulin ratio of normal individuals. When one recalls the edema of starvation and that occasionally seen in pernicious anemia in the stage of severe anemia, there might seem to be a correlation between the lowered protein of the blood and the edema, an idea that numerous observers have expressed in various ways and for which there is some evidence already adduced.

With this possibility in mind, Barker and Kirk, working in my clinic under the supervision of O'Hare, have kept the blood protein of dogs low for a long time by very frequent bleedings, preventing anemia by returning the washed red blood cells to the just bled dogs. This work will be reported later by Barker and Kirk. Suffice it to say here that these dogs developed edema, low basal metabolism, low blood protein with reversal of the albumin: globulin ratio, and increased blood lipoids.

In my own clinic we have had, under the leadership of O'Hare, an especial interest in chronic nephritis (Bright's disease) for seventeen years. During that period we have had opportunity to observe patients with edema and marked albuminuria and to follow the course of their disease. So far we have had but one autopsy that gave the renal changes fairly consistent with nephrosis, as described by the various reporters, in the sense of tubular degeneration without glomerular lesions, but this patient failed to show the typical clinical picture of nephrosis. All of our patients who had extensive edema of the nephrotic type and who died have shown glomerular lesions, either those usual to glomerular nephritis or an amyloidosis of the kidney including the glomeruli. One case already reported [22] may be cited briefly as an example:

A woman, aged 60, was admitted to the Peter Bent Brigham Hospital, Aug. 31, 1917, where she remained until her death, Oct. 9, 1918. She had diphtheria three months before admission. Shortly after this her eyes were puffy and her legs began to swell. Shortly her abdomen swelled. Never after this was the edema lost. Her blood pressure was 165 systolic and 95 diastolic. She had ascites and this was pseudochylous in type when tapped, in all on fifteen occasions. The urine always contained a large amount of albumin, hyaline and granular casts and red blood cells from rare to very many. The basal metabolism ranged from minus 41 to minus 35 (eight observations). In the last few weeks of life the phenolsulphonphthalein excretion fell and the blood urea nitrogen rose; otherwise renal function was good except for salt and water. Autopsy showed a marked degree of chronic glomerular nephritis.

Similar to our experience appears too to have been the experience at Mount Sinai Hospital, where Epstein had worked and Baehr [23] last spring made the statement: I would like to agree with the previous speaker and call attention to the fact that the clinical diagnosis of nephrosis is being made altogether too frequently. Every case of glomerulonephritis has a certain nephrotic

20. Löwenthal, K.: Virchows Arch. f. path. Anat. **261**: 109, 1926.
21. Mason, E. H.: Internat. Clin. **1**: 163 (March) 1926.
22. Christian: Oxford Medicine, New York, Oxford University Press, American Branch **3**: 658, 1921; **3**: 692 of revision of Dec. 1, 1924.
23. Baehr: Am. J. Path. **4**: 632, 1928.

element. At the Mount Sinai Hospital in New York, where we have studied nephrosis for a long time, we have only once encountered a pure nephrosis in an adult at autopsy. Every other case clinically diagnosed nephrosis has at autopsy presented characteristic evidences of glomerulonephritis. The one time nephrosis occurred in an adult was in a syphilitic. In children we do see pure nephrosis not infrequently. In my experience they are usually superimposed on a chronic pneumococcus infection in the upper respiratory tract. Eventually most of these children die of a pneumococcus infection of their ascites.

A study of the recent literature, along with my own clinical experience and the observations on dogs of Barker and Kirk during the current year, have led me to adopt the following conception of nephrosis as a clinical condition:

1. Given a considerable and prolonged protein deficit in the blood, edema, lowered blood protein, relative increase in blood globulin at the expense of albumin, hypercholesteremia, and lowered basal metabolism will appear, not always in the same order and possibly in varying degree.

2. The most common cause for such blood protein deficit is marked and prolonged albuminuria.

3. The cause of such albuminuria is a renal lesion.

4. Often this renal lesion is obviously in the glomeruli, but in many reported cases, mainly those patients dying of infection relatively early in the course of the disease, the glomeruli show very slight or no demonstrable lesions, while there are extensive degenerative changes in the tubules. For the latter, knowing what we do of renal physiology, and believing that the actual daily amount of albumin in the urine in many of these patients is in excess of what could possibly come from degenerating renal epithelium, I am of the opinion that the source of the albuminuria is in the passage of albumin through the walls of blood vessels, most probably, glomerular capillaries, a functional change in a colloid membrane of which the microscope gives no evidence. Obviously this explanation is mere surmise.

5. Holding these views, there seems to me to be no justification for regarding nephrosis as other than a variety of kidney disease, a form of chronic nephritis (Bright's disease).

6. Clinically it seems to me that nephrosis may be used as the name of a syndrome such as defined by Munk, Volhard, Fahr, Epstein and others, but when it occurs it does not mean that a definite and single form of pathologic lesion will be found in the kidney, but rather that there may be a degenerative lesion of the tubules with normal appearing glomeruli, there may be amyloidosis, there may be glomerular lesions that will progress into typical chronic glomerular nephritis. Furthermore, all of these lesions may be found in patients who never showed the syndrome of nephrosis.

7. While I can offer no objections to such a clinical use of the term nephrosis, I can see no great advantage of it over the term I have used in a very simple clinical classification of nephritis; namely, subacute or chronic nephritis with edema. If used clinically, I think it should be used as the name of a syndrome occurring during the course of chronic nephritis (Bright's disease). If it is helpful to the pathologist to use nephrosis for degenerative lesions, as suggested by Müller, obviously there can be no objection; only as clinicians I think we should recognize that we may be unable during life to predict accurately whether the pathologist is going to find more or less nephrosis or less or more nephritis; in other words, we are still in the same predicament in which we have always been, unable to use a pathologic classification of nephritis that can be applied easily and accurately in the clinic.

8. The important practical contributions of Munk, Volhard, Fahr and Epstein and the others has been in emphasizing the protein loss in these cases and the need of liberalizing the diet for renal cases, so that it contains a liberal protein content to replace the loss of albumin from the blood, so long as renal function will permit of its utilization without retention of nonprotein nitrogen.

9. In this group there are certain, though few, patients with a definite cause for the renal disturbance, syphilis.

10. One gets the impression that what has been added to the clinical picture in recent years has resulted from the application of newer clinical methods giving more exact data in regard to processes formerly known or at least suspected, and that after much writing about it not a great deal more of importance is known today than was understood by clinicians of the past under the terms parenchymatous nephritis, amyloid disease of the kidney, syphilis of the kidney, the lipemia of certain cases of nephritis, and the pasty pallor, edema and languor of some forms of nephritis. Extensive tubular degeneration in certain types of large white kidney has been known for a long time. Older descriptions of amyloid kidney and syphilitic nephritis, allowing for differences in terminology and lack of some new laboratory methods, correspond extremely closely with those of "lipoid" nephrosis. Diminution of concentration of plasma protein was noted by Bright [24] in 1836, as was the milkiness of the serum; "if the blood is drawn it is often buffed or the serum is milky and opaque; and nice analysis will frequently detect a great deficiency of albumin." Changes in the albumin: globulin ratio have been the subject of study for many years.[25] Opalescent serous effusions were pointed out a long time ago. Lowered basal metabolism had to await clinical methods for its determination, and this seems to be about the only new feature that recent investigations have added to our knowledge of the group of patients with extensive edema of renal origin. This lowered basal metabolism does not seem to be other than part of the picture. Evidence for its relation to deficient thyroid function is meager and, in my opinion, it should not be considered analogous to myxedema due to a lesion reducing thyroid function.

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24. Bright: Guy's Hosp. Rep. **1**: 338, 1836.
25. Mya and Viglezio (1888), cited by Csatáry, who also reports decreased albumin: globulin ratio, Deutsches Arch. f. klin. Med. **48**: 358, 1891.

Contributors to Obstetrics and Gynecology.—If a young physician were suddenly thrust backward forty years, one of his strangest experiences would be to miss so many names with which we are familiar in our branch of medicine. There was no Stroganoff to systematize the use of morphia in eclampsia; no Watkins to show us how to cure a cystocele; no Wertheim to teach us how to do a panhysterectomy for cancer; no Potter to improve the technic of version and to enlarge its indications; no Rubin's test for patency of the tubes; no Titus or Thalheimer to demonstrate the advantages of the intravenous treatment of the toxemia of pregnancy with dextrose and insulin; no Kielland, Barton or Piper with their new models of forceps. —Hirst, B. S.: The Progress of Teaching and Practice in Gynecology During the Last Four Decades, *Am. J. Obst. & Gynec.*, February, 1929.

THE STABILITY OF DIGITALIS AND ITS PREPARATIONS *

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Many have sought to determine the cause of deterioration in preparations of digitalis, and the discovery of one or more factors that are concerned in the deterioration has caused certain manufacturers to claim complete stability for their preparations. The accumulation of a large number of specimens of digitalis leaf and preparations of many types, some of which have been standardized during the past twenty years, afforded us an opportunity for making a comparison of the rate of deterioration in a wide variety of these preparations.

A few references to the literature will suffice to indicate prevalent opinions and we shall then present only those results of our experiments which are of practical interest in therapeutics, leaving the details of the experiments to be published elsewhere. All our tests of activity, except a few with rapidly eliminated fractions, were made by the method described by Hatcher and Brody.[1]

Focke [2] reported that a specimen of leaves that contained 12 per cent of moisture lost about three fourths of its activity within less than three months; he stated that equal deterioration occurred within a year in other specimens having from 6 to 8 per cent of moisture, and great deterioration when there was only 3 per cent of moisture present. Since nearly all digitalis leaves contain moisture unless kept with excessive care, Focke's results would appear to indicate that practically all digitalis undergoes rapid decomposition.

Hale [3] investigated several factors concerned with the variability of digitalis and its preparations, including the influence of time. He found that leaves 8 years old containing 9.1 per cent of moisture were of the same activity as recent English leaves. While the activity of these specimens had not been determined previously, Hale's results do not lend any support to Focke's contention.

Gold and De Graff [4] examined four specimens of digitalis that had been examined previously, one five years, one four years, and two more than two and one-half years before. None showed deterioration, though they had been kept in corked bottles without special precautions.

Houghton and Hamilton [5] examined thirty-eight specimens of previously standardized extracts, fluidextracts and tinctures, and reported that they had deteriorated at rates varying from an average of 4 per cent a year during six years to that of 10 per cent a year during three and one-half years. They were inclined to the view that a high alcoholic content favors stability.

Pittenger and Mulford [6] examined fifteen tinctures and reported deterioration in every specimen except one, varying up to 75 per cent in seven months; and Hamilton,[7] in attempting to refute the conclusions of Pittenger and Mulford, examined six specimens of tincture. He found much lower averages of deterioration, but one of his specimens was 43 per cent less active after six months.

Hale examined eight preparations in 1908 and in 1910 and found deterioration varying from 4.3 per cent in the strongly alcoholic to 33.3 per cent in the weakly alcoholic. He reported that digitol, containing 30 per cent of alcohol, and digalen, which contained 7.5 per cent, had deteriorated more rapidly than the official tinctures, which contained approximately 70 per cent. He also examined three tinctures, one 8 years old, one 3 years and one of 2 weeks and found them to be of equal activity. Haskell, Daniel and Terry [8] in 1922 examined four tinctures that had been tested in 1917. Their table shows that the average activity of these was exactly the same in 1922 that it was five years before.

Some have sought to avoid oxidation by replacing the air in the container with an inert gas. Weak hydrochloric acid decomposes certain constituents of digitalis, such as gitalin, rapidly even at body temperature, and Hatcher and Eggleston [9] found an old acetic extract of digitalis to be practically inert. Heat used in making the infusion causes changes in some of the active principles of digitalis, with some loss of activity. Some years ago a pharmaceutic manufacturing firm was asked to discontinue the marketing of ampules of ouabain on the ground that they became almost inert within a few days, and a prominent pharmacologist wrote to one of us that he had been informed that infusion of digitalis became almost inert after a single day.

Hatcher and Eggleston obtained a specimen of digitalis leaf from E. R. Squibb & Sons and examined it in 1913, at which time it was at least 25 years old. The leaves were powdered at that time and the powder has been kept in a corked wide-mouth bottle, without special precaution, during the past sixteen years. We find that this powder, now at least 41 years old, has the same activity that it had in 1913, and that it is more active than many fresh specimens obtained recently.

A specimen of powdered digitalis from the crop of 1905 was sent to this laboratory in 1906, and during the past twenty-three years it has stood on a shelf in the pasteboard carton in which it was received. Its activity at present is about 70 per cent of that of the average digitalis and there is no reason to suppose that it has undergone any deterioration; but, unfortunately, it was not examined at the time it was received.

One of us prepared an infusion of digitalis, Feb. 5, 1918, heated it to the boiling point, and with it completely filled small bottles into which corks were forced, and the bottles were sealed with paraffin. The activity was determined shortly after the infusion was made, after an interval of a year, after an interval of about two years and five months, and after an interval of nearly eleven years. No deterioration could be detected within the first two years and five months, at which

* From the Department of Pharmacology, Cornell University Medical College.

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2. Focke, C.: Die physiologische Wertbestimmung der Digitalis blätter, Arch. d. Pharm. **241**: 128, 1903.
3. Hale, Worth: Digitalis Standardization and the Variability of Crude and of Medicinal Preparations, Bull. 74, Hyg. Lab., U. S. P. H. S., January, 1911.
4. Gold, Harry; and De Graff, A. C.: Studies on Digitalis in Ambulatory Cardiac Patients: I. The Use of Digitalis in the Cardiac Clinic, J. A. M. A. **90**: 1016 (March 31) 1928.
5. Houghton, E. M., and Hamilton, H. C.: The Pharmacological Assay of the Heart Tonics, Am. J. Pharm. **81**: 461 (Oct.) 1909.
6. Pittenger, P. S., and Mulford, H. K., Jr.: The Deterioration of "U. S. P." and "Fat-Free" Tinctures of Digitalis, J. Am. Pharm. A. **7**: 236 (March) 1918.
7. Hamilton, H. C.: The Deterioration of Digitalis Extracts, J. Am. Pharm. A. **7**: 153 (May) 1918.
8. Haskell, C. C.; Daniel, D. S., and Terry, G. S.: Deterioration of the Tincture of Digitalis, J. Am. Pharm. A. **11**: 918 (Nov.) 1922.
9. Hatcher, R. A., and Eggleston, Cary: Observations on the Keeping Properties of Digitalis and Some of Its Preparations, Am. J. Pharm. **85**: 203 (May) 1913.

time a fraction of this infusion was used clinically by Dr. Cary Eggleston.[10] The apex rate of a patient after rest in bed was 145, and the radial rate was 72. He received a total of 150 cc. of the infusion within twenty-four hours, causing a prompt fall of the apex rate to 68 with a total disappearance of pulse deficit, showing that the infusion exerted the full therapeutic effects. After an interval of nearly eleven years the activity had fallen to about one half of the original, but larger doses still produce the typical digitalis action.

Another specimen of infusion was prepared and bottled in the same way, Feb. 24, 1921. The bottles were wrapped in manila paper and have been kept in the laboratory without special care since that time. When tested, Nov. 15, 1928, the infusion had lost about 65 per cent of its activity during seven years and nine months. It was stored during the winter in an overheated room almost directly over the furnace, and when tested in April, 1929, it was about one-fourth as active as when prepared.

It was used clinically, through the courtesy of Dr. John Wyckoff, by Dr. Harry Gold, to whom we are indebted for the following reports:

CASE 1.—H. C., a man, aged 62, after several days' rest in bed, had a ventricular rate of 100, and a pulse rate of 78. He received 570 cc. of the infusion during four days. The ventricular rate and pulse rate dropped to 54, with marked general improvement and the excretion of 4,300 cc. of urine during the last two days. The patient's weight decreased by 10 pounds (4.5 Kg.). On the next day 150 cc. of the infusion was given, with complete digitalization, including nausea.

CASE 2.—R. A., a man, aged 54, after several days' rest in bed had a ventricular rate of 126 and a pulse rate of 90. He received a total of 680 cc. of infusion during six days. The ventricular rate and pulse rate dropped to 84, without other marked improvement.

It is especially interesting that this infusion, which had deteriorated to one fourth of its original activity, exerted the typical digitalis action. The activity of 570 cc. of the infusion, shown by the biologic test, was equal to that of 14 cc. of an average tincture of digitalis, or about the amount usually required to digitalize a patient.

A specimen of digitol aqueous (now called "digitos") was received from the manufacturers, April 29, 1922. When examined after an interval of seven years, it was about one-half as active as a specimen of digitol obtained directly from the H. K. Mulford Company, April 19, 1929. It is about as active as our 11 year old infusion and more active than that made in 1921.

A commercial specimen of infusion of digitalis in ampules, which had been kept in this laboratory during ten years or more, was less active than our older infusion, and a little more than that made in 1921. The activity of the infusion in the ampules was not determined at the time they were received, but the results do not lend any support to the view that the infusion kept in ampules is more stable than that kept in a carefully corked glass bottle. While no one would think of recommending that infusion of digitalis be kept for many years, the results of our experiments are instructive in that they show that a properly made infusion does not undergo rapid decomposition, and, further, that the loss of activity does not involve the development of dangerous toxic substances.

Reference has been made to the suggestion that ampules of ouabain (so-called crystalline strophanthin) are unreliable. This suggestion was made in 1918, at which time the manufacturers in question were asked to submit specimens of ouabain solution in ampules of soft glass and in ampules of hard glass. Some deterioration had occurred in the soft glass ampules at the time that they were received in this laboratory; after eleven months they had lost 90 per cent of their activity. The solution in hard glass deteriorated much more slowly and during one year no change was perceptible, but when examined in 1923, after an interval of five years, some had lost about 60 per cent of their activity. Closely similar results were observed with sterile solution of ouabain which one of us had placed in hard and soft glass ampules and in glass-stoppered flint bottles, Feb. 9, 1918. No deterioration occurred in the soft glass ampules in six weeks, in the bottles in three months, or in the hard glass ampules in five months. At the present time, all the old solutions kept in soft glass are inert or nearly so, some of those in hard glass are about as active as they were six years ago, others are a little weaker. Ampules of amorphous strophanthin which were imported more than ten years ago were also nearly inert. The results of these experiments show that properly prepared ampules of ouabain in hard glass may be used within a reasonable period with confidence, but that soft glass should not be used.

An alcoholic solution of ouabain which had been kept in a glass-stoppered bottle on a shelf in the laboratory during twenty-one years showed a loss in activity of only 20 per cent. Ampules of cymarin received, April 13, 1914, have lost about 70 per cent of their activity. Ampules of digitalysatum, received in this laboratory in September, 1915, labeled "Sterisol-Digitalysatum," containing no alcohol, were practically inert in 1929. This is of especial interest because of the claim that has been made that digitalysatum is especially stable in contrast to the other digitalis preparations, and that no change occurred after a lapse of five years. Curiously, a specimen of digitalysatum containing 12 per cent of alcohol which had been kept in an ordinary corked bottle, not sealed, without care since September, 1915, lost only about 30 per cent of its activity in nearly fourteen years, assuming that this was the same as that of a specimen which had been examined shortly after its receipt in this laboratory.

Ten ampules of digifolin were submitted to this laboratory by a hospital in February, 1923. The label indicates that the liquid is of the same activity as the tincture of digitalis, but these ampules were apparently less than half as active as the tincture of digitalis then used in the hospital. Ampules of digifolin received in June, 1928, were tested in May, 1929, at which time the activity was one-third that of the average official tincture of digitalis. Ampules of digifolin received in November, 1916, were tested in April, 1929, and found practically inert. It is not remarkable that those ampules which had been kept thirteen years had undergone extensive deterioration, but the results with the other two specimens were distinctly surprising because the advertising received in 1928 contains the statement: "The fact that Digifolin-Ciba does not deteriorate with age is sufficient evidence that deterioration is due to the presence of saponins and other decomposition products. These substances have been removed from Digifolin-Ciba."

We do not mean to imply that digifolin-Ciba or digitalysatum is more prone to decomposition than are nonofficial preparations, but, on the other hand, the manufacturers' claims of unusual stability are not supported by the results of our experiments.

10. Eggleston, Cary: Unpublished data.

Ampules of digipuratum received in July, 1913, were examined in this laboratory in July, 1920, and found to be less than half as active as a corresponding amount of a fresh specimen, then called digitan. We examined another specimen in ampules of unknown age, but probably more than 10 years old, and found it about one half as active as a corresponding amount of the fresh specimen of digitan, but we had enough for only one test.

A specimen of tincture of digitalis in ampules from which the air had been removed before sealing, and containing 44 per cent of alcohol, was examined in this laboratory in March, 1918. After an interval of about ten years, it had apparently decomposed to the extent of about 45 per cent, but the material available was sufficient for a test on only one animal.

A specimen of fluidextract of digitalis obtained from E. R. Squibb & Sons in 1913, at which time it was at least 30 years old, was examined by Hatcher and Eggleston and later it was used clinically. It was then less active than the average fresh fluidextract of good quality. It was examined by one of us in 1919, at which time the activity was the same as that found by Hatcher and Eggleston in 1913. Our examination does not indicate that it has undergone any deterioration during the interval of sixteen years following its first examination, but there is a possibility that some evaporation occurred, as the bottle contained only about 2 cc.

An active specimen of fluidextract of digitalis obtained from the H. K. Mulford Company and examined by one of us in 1913 was kept in a cork-stoppered bottle, and in 1919 its activity was 83 per cent of the original. Later it was transferred to a glass-stoppered bottle, and the result of our examination indicates that it lost about 32 per cent of its original activity in sixteen years.

A specimen of tincture of digitalis prepared by one of us in 1920, which deteriorated rapidly during the first six months, was examined again after an interval of nine years. It had changed very little after the second examination and it is now only a little less active than it was six months after it was prepared. It has been kept throughout the period in a cork-stoppered and only partly filled flint bottle.

A specimen of tincture made by one of us in 1913 lost about 27 per cent of its activity in sixteen years; another made in 1913 from the leaf then 25 years old, with 50 per cent alcohol lost about 38 per cent of its activity in sixteen years; and a very active tincture prepared in this laboratory in 1912 lost about one half of its activity in sixteen and one-half years.

A tincture prepared by one of us in January, 1918, and tested at that time showed only slight deterioration after fifteen months, but after eleven years and two months it had lost 35 per cent of its activity.

An active specimen of tincture prepared by one of us in August, 1922, was only about 14 per cent less active when examined after an interval of nearly seven years. A similar change occurred in another tincture in four years and seven months.

Four specimens of digitol were tested. The first, digitol aqueous, has been discussed. One specimen had been kept in an ordinary glass bottle for ten and one-half years; another was kept for an unknown period of time in a sealed "vacule," so called because the air had been removed by a filter pump before the container was sealed; one specimen tested by the manufacturers, Feb. 8, 1929, was tested by us ten weeks later. Assuming that all were originally of uniform activity and that the most recent had not deteriorated, that kept in an ordinary bottle lost about 28 per cent of its activity in ten and one-half years; that in the vacule containing 70 per cent alcohol lost 42 per cent of its activity. This shows that such elaborate precautions for the removal of air are unnecessary. A corked 1-ounce bottle filled in the ordinary way contains about 1 mg. of atmospheric oxygen, and there is no reason to suppose that it has any perceptible influence on the decomposition of the active constituents of digitalis.

W. A. Puckner has long insisted that the labels of proprietary preparations which are subject to deterioration should bear the date of preparation or that after which the activity cannot be guaranteed. Our results strongly support that contention and we believe that manufacturers should date all such preparations.

A tincture of digitalis containing 65 per cent of alcohol was received in January, 1923, at which time it was said to be 50 per cent more active than the official tincture. When examined after six years, it was about one-third less active than the average official tincture. Hence, it had apparently undergone decomposition to the extent of about 50 per cent. Two specimens of tincture of digitalis prepared by E. R. Squibb & Sons, April 6, 1911, were received in this laboratory in 1913, and examined by us after an interval of eighteen years following their preparation. The first of these was about one-fourth weaker than an average fresh tincture of good quality. The other had been made from the same specimen of digitalis but which had been treated with magnesium carbonate to remove calcium salts and to neutralize acidity. Its activity was equal to about 60 per cent of that of the first, and it was only about half as active as an average fresh tincture of good quality. A tincture prepared in 1913, and containing 44 per cent of alcohol, was a little less than half as active as an average fresh tincture.

Two specimens of purified tincture prepared by one of us with 60 per cent alcohol in 1921, and one in 1922 and standardized at those times, retained their activity unimpaired during seven years, and an ether-soluble fraction of digitalis principles in 60 per cent alcohol also retained its activity unchanged during eight years. The purified tincture consists of the so-called gitalin fraction of digitalis obtained by shaking an infusion with chloroform, distilling the chloroform, and dissolving the residue in 60 per cent alcohol. A slightly different preparation of this type kept in 60 per cent alcohol lost about half its activity in seven years. One weakly alcoholic solution became inert; another lost about half of its activity. Our experiments with purified tinctures are not sufficiently numerous to permit of the general statement that all such tinctures are equally stable, but they point to the importance of strong alcohol as a factor in the stability of tincture of digitalis. Other experiments, however, prove that strong alcohol is not the only factor, since the rate of decomposition in some strongly alcoholic tinctures was equal to that in others of low alcoholic content in which other factors were more favorable for stability. The stability of these purified tinctures is of theoretical, rather than of practical, importance to the clinician because dried digitalis leaf is permanent, and because the official tincture and the official infusion are sufficiently stable for all ordinary purposes.

The results of our experiments and of those of others cited show that properly dried digitalis leaf may be kept almost indefinitely without deterioration. No special process of drying or extraordinary skill is necessary. It may be kept in the form of the whole leaf, in powder or in tablets.

The stability of digitalis in powder is being utilized in some forty affiliated cardiac clinics of the New York Tuberculosis and Health Association following the institution of the use of standardized tablets in the Adult Cardiac Clinic of Bellevue Hospital six years ago. An amount of digitalis sufficient to supply these clinics at least one year (and probably two years) has been standardized by Dr. Harry Gold and it has been made into tablets of several different sizes, insuring comparable dosage in all the clinics. It is obviously desirable to extend the principle to include all cardiac clinics in the United States in order that studies of dosage in one clinic may be compared with those in others. There is no obvious difficulty in accumulating supplies of the leaf to last more than one year, though it might take more than a year to bring the plan into operation.

Infusion of digitalis in tightly corked and sealed bottles deteriorates very slowly. We do not recommend that it be kept for years, but the clinician can use with confidence the infusion prepared by a properly qualified pharmacist. The preparation does not require any special skill.

There is some evidence that the active principles in the infusion which resist decomposition are precisely those which are absorbed most readily from the gastrointestinal tract, and that those which decompose are the principles which are poorly absorbed and which contribute little to the therapeutic action of oral doses of the infusion or tincture.

The official tincture of digitalis, containing about 70 per cent alcohol, deteriorates so slowly that the clinician can use it with confidence that it will induce the desired effects in suitable cases, especially since modern practice directs that the dose be increased cautiously, if necessary, until minor toxic symptoms, such as nausea, are induced. With this in mind one may use a tincture of any age in an emergency, with confidence that sufficient doses will induce the typical digitalis action.

There are several causes that contribute to the slow deterioration of the infusion and tincture of digitalis, but the presence of a little air in the bottle is not important. The decomposition is probably due mainly to a constituent of digitalis, since the purified principles in 60 per cent alcohol, and ouabain in 90 per cent alcohol, deteriorated little during many years.

SUMMARY

Six specimens of powdered digitalis have been examined in this laboratory after intervals varying from one to sixteen years, and in no case has deterioration been detected, and it may be added that no one in this laboratory has ever observed anything indicative of deterioration in one of the many specimens of powdered digitalis used.

Powdered digitalis, in tablets or in capsules, is admirably suited for securing uniformity of dosage where individual patients, clinics or groups of clinics are provided with sufficient to last one year or more.

A sterile infusion of digitalis undergoes little change within several months, and deterioration then results solely in diminished activity, not in increased toxicity.

The official tincture of digitalis retains its activity with comparatively little change during several years, and any change that does occur merely calls for a corresponding increase in dosage. The secret of deterioration of liquid preparations of digitalis has not been explained fully, and there is no evidence that any of these preparations are as stable as powdered digitalis kept with ordinary care in a corked glass bottle.

Aqueous solutions of strophanthin, ouabain or other digitalis principles, kept in ampules of soft glass, deteriorate rapidly. Ouabain solution in ampules of hard glass decomposes slowly.

Our investigation lends no support to the contention that any of the digitalis specialties mentioned are more stable than the official digitalis tincture. All liquid preparations of digitalis should bear the date of manufacture.

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Clinical Notes, Suggestions and New Instruments

NARCOLEPSY FOLLOWING EPIDEMIC ENCEPHALITIS

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Narcolepsy as a sequel of epidemic encephalitis is a rare although definite entity described by Economo,[1] Stiefler,[2] Symonds,[3] Adie,[4] and Kluge[5] in Europe and by Spiller[6] in America. As far as I am able to determine, Spiller's is the first and the present one is the second account in American literature of narcolepsy occurring as a postencephalitic phenomenon. Several other cases of so-called narcolepsy following encephalitis have been reported in the literature, but careful examination of the reports shows that these are not cases of true narcolepsy but merely inversions of the sleep rhythm with sleep occurring during the day. Also, many of these cases do not have the characteristic "Lachschlag" which the present one shows.

Narcolepsy was first described by Gelineau in 1880, and since then descriptions of the disease have been extremely inconsistent. It has been called by various names—Singer's "Hypnolepsie," Friedmann's "Kleine gehaufte Anfalle"—and its symptomatology has been confused with everything from hysteria to epilepsy. The most widely accepted concept of the syndrome today is that offered by Gelineau and Redlich,[7] who state that it has two outstanding symptoms. These are (1) periodic attacks of involuntary sleep, and (2) attacks of temporary loss of tone in the voluntary muscles brought on by some emotional stimulus. The attacks of involuntary sleep may come at any time during the day, they last for from several minutes to half an hour, the sleep is quiet and normal, and the patient can be awakened by adequate stimulation. The amount of sleep the patient receives at night does not influence the number of diurnal sleeping attacks, which may occur under the most varied conditions, such as walking, talking, driving, plowing, playing cards, military or naval duty, and even during coitus.[8] The second symptoms, "loss of tone" attacks, appears when the patient laughs, is frightened, or becomes angry. There is a sudden loss of tone in all the skeletal muscles, and the patient collapses without experiencing any disturbance in consciousness. This condition lasts for only a short time, and in a few minutes the patient becomes perfectly normal. Because this phenomenon so often accompanies the act of laughing, German writers refer to it as a "laugh stroke" (Lachschlag).

Literature contains accounts of both "essential" and "symptomatic" narcolepsy. "Essential narcolepsy" is the term applied

1. Economo, Constantin: Über den Schlaf, Vienna, Julius Springer, 1925.
2. Stiefler, G.: Narkolepsie nach Encephalitis Lethargica, Wien. klin. Wchnschr. **40**: 1044-1046 (Oct.) 1924.
3. Symonds, C. P.: Narcolepsy as a Symptom of Encephalitis Lethargica, Lancet **2**: 1214-1215 (Dec.) 1926.
4. Adie, W.: Lancet **2**: 1017 (Nov.) 1926.
5. Kluge, A.: Narkolepsie oder Encephalitis? Ztschr. f. d. ges. Neurol. u. Psychiat. **110**: 415-421, 1927.
6. Spiller, W. G.: Narcolepsy Occasionally a Postencephalitic Syndrome, J. A. M. A. **86**: 673-674 (March 6) 1926.
7. Redlich: Über Narkolepsie, Ztschr. f. d. ges. Neurol. u. Psychiat. **95**: 256, 1925.
8. Adie, W.: Lecture at Queen's Square Hospital, London, October, 1925.

to the disease when no organic basis can be found for it,[9] while "symptomatic narcolepsy" is the term applied to the disease when it rests on some organic disturbance in the brain (arteriosclerosis, diabetes, cerebral tumor or encephalitis). Many of the cases of so-called symptomatic narcolepsy described do not show both sleeping and loss of tone attacks; therefore, many of them should not be included under this term.

REPORT OF CASE

The following is a case of true symptomatic narcolepsy following an attack of acute epidemic encephalitis:

Miss A. F., a school teacher, aged 36, with negative family and past histories, was first seen by me in consultation with Dr. J. H. Wallis of Rice Lake, Wis., in August, 1928. In 1920 she had an attack of "influenza" lasting for about five weeks, during which time she had headache and some fever, and was unusually drowsy during the day but could not sleep at night. She recovered from the acute attack—which in all probability was acute epidemic encephalitis—but since then has been troubled with diurnal attacks of involuntary sleep and periodic loss of muscular tone resulting from emotional stimulus. Part of her written account of the illness reads as follows:

"No excitement or commotion has the power to overcome that sleep. I often sleep as often as five or six times a day. This is not a natural sleep but a dead sleep which comes without warning. Many times I realize that people are speaking to me and I understand what they are saying but am powerless to answer. At times I can be awakened instantly by the sound of the voice, but when I am awakened memory fails me, and I am humiliated by being forced to admit my inability to remember what the conversation has been. The longest sleeps generally come at about 10, 2 and 6 o'clock, sometimes lasting as long as two hours.

"I know that if I wish to go to an entertainment of any kind I cannot trust myself to laugh. If I must laugh or be where there is much excitement I must place my hands on some object that will hold my weight. My strength leaves me until I haven't the strength of a tiny babe. At first my knees double up and I fall. From there the weakness spreads to my neck and my head falls forward or sideways. I have no control of any of my muscles, the weakness passing through my shoulders and arms until it spreads over my whole body. If I have anything in my hands I drop it. This loss of strength and control passes through my whole system like a tornado playing havoc wherever it goes—all due to a smile or a little excitement. The strength soon returns and I have control of the muscles again."

In addition to these symptoms the patient complained of muscular stiffness, tremor of the hands, almost constant headache, extreme irritability, restlessness and insomnia.

Neurologic examination revealed a moderate hypertonus of all the muscles, the right pupil slightly larger than the left, slight weakness of the right facial nerve, a fine tremor of both extended hands, some dysmetria of the right arm, and exaggeration of all deep tendon reflexes. Blood pressure, urinalysis and blood studies gave normal observations. The blood Wassermann reaction was negative.

Since I first saw her the patient has had about every conceivable form of treatment without avail. Diet, internal glandular therapy, sodium salicylate, belladonna, stramonium, acriflavine and various sedatives all have failed to give relief. It is a remarkable testimonial to the patient's grit and perseverance that, in spite of her handicap, she has continued to teach school without loss of time.

COMMENT

This case is undoubtedly one of symptomatic narcolepsy following epidemic encephalitis. That lesions in the midbrain can cause sleep has been shown by Hess,[10] who injected ergotamine into the third ventricle of animals and produced periodic sleep. Also, Pette[11] saw abnormal sleep resulting from a circumscribed lesion of the central gray substance in the third ventricle. Further, Adler[11] describes a case of sleep disturbance resulting from an abscess the size of a pea in the region of the third ventricle. Straussler[12] has observed similar phenomena in lesions of the infundibulum. In the light of these reports, and since the pathologic changes in chronic encephalitis involve principally the midbrain, the pathologic connection between symptomatic narcolepsy and chronic encephalitis is established.

CONCLUSIONS

1. Narcolepsy as first described by Gelineau and Redlich has two symptoms: (*a*) periodic attacks of involuntary sleep, and (*b*) attacks of temporary and complete loss of tone in the skeletal musculature following an emotional stimulus.

2. In "essential" narcolepsy, no organic basis for the syndrome can be found. "Symptomatic" narcolepsy is the result of some organic lesion in the brain.

3. Reports of sleep disturbances following lesions in the third ventricle and the fact that in chronic encephalitis the pathologic changes are principally in the midbrain establish the relationship between chronic encephalitis and narcolepsy.

4. In the present case of narcolepsy following encephalitis, all forms of treatment have failed.

1125 Lowry Medical Arts Building.

9. Kamman, G. R.: Narcolepsy, demonstrated before meeting of Central Neuropsychiatric Association, October, 1927.
10. Hess, W. R.: Neurologische und psychiatrische Abhandlungen, Schweiz. Arch. f. Neurol. u. Psychiat. **16**: 36, 1925.
11. Quoted by Kluge (footnote 5).
12. Straussler: Klin. Wchnschr., 1927, number 18, p. 878.

CAROTINEMIA IN AN ADULT

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Carotinemia as a clinical entity was established by the work of Hess and Meyers[1] in 1923. They observed a peculiar symptomless discoloration of the cheeks, alae nasi and forehead, and occasionally a generalized tinting of the skin in children fed on a high carrot diet. They were able to produce the pigmentation by the administration of carotin, and they saw it disappear when the pigment was withheld and the pigment-bearing vegetables were eliminated from the diet. It was also discovered that spinach, oranges and egg yolk contain a large amount of carotin.

DeBuys[2] reported two interesting cases of carotinemia in new-born children, observed and studied in 1911 and 1913, and diagnosed in 1923 after the publication of the paper by Hess and Meyers. A high vegetable diet had been advised for the mother, who took the advice too literally and practically lived on green vegetables. Each child when born was normal in every way but markedly pigmented. The mother's milk was colored a deep orange-yellow. When the children were removed from the breast and put on artificial feeding, the discoloration promptly faded. The mother returned to a balanced diet and consequently to normal color.

Xanthosis diabetica, a yellow discoloration of the skin occurring in diabetic patients on a high vegetable diet, was reported by von Noorden in 1904. It has since been described by Stoeltzner[3] as pseudo-icterus. The work of Palmer and his associates on carotin has cleared up the cause of these pigmentations and put them all in the class of carotinemia. They have demonstrated that the color of body fat, milk, egg yolk, and serum in cases such as the ones here described is due to carotin which in no way differs from the pigment isolated from vegetables.

REPORT OF CASE

History.—Mrs. Mary B., aged 48, entered the Presbyterian Hospital because of a slowly deepening jaundice, pain in the epigastrium and constipation. Six months previous to entry she had spent six weeks at a sanatorium under treatment for these symptoms. Following a "fast of forty-five days" she was put on a diet limited strictly to vegetables and fruits, and dismissed. After approximately three months of this regimen she noticed that her skin, especially the palms of her hands, the soles of her feet, and her face, was becoming yellow. This discoloration had deepened to a rather marked general orange-yellow at the time of presentation. The pain in the epigastrium and the constipation had been present for six years, and were typical of a mucous colitis brought on by the prolonged injudicious use of cathartics.

1. Hess, A. F., and Meyers, V. C.: Carotinemia: A New Clinical Picture, J. A. M. A. **73**: 1743 (Dec. 6) 1919.
2. DeBuys, L. R.: Tr. Mississippi State Medical Association, 1923, pp. 133-138.
3. Stoeltzner, W.: München. med. Wchnschr. **66**: 419, 1919.

Examination.—The physical examination revealed a general orange-yellow pigmentation of the skin, most marked in the palms of the hands and the soles of the feet, but no tingeing of the sclerae. The transverse colon was slightly tender. The liver came below the costal margin about 3 cm. on deep inspiration; the edge was smooth and not tender. The remainder of the physical examination was negative.

Laboratory Observations.—The blood pressure was 130 systolic and 80 diastolic; the hemoglobin was 88; the red blood cells numbered 4,600,000, and the leukocytes 9,200. The urine was normal; there was no bile; the stools were soft and formed, and bile pigments were present. A cholecystogram made by Dr. Rose showed normal filling and normal emptying; there was no evidence of calculi. A barium enema revealed a normal colon except for a slight spasticity in the region of the transverse portion. The Wassermann reaction was negative; the icterus index was 33.3, and the van den Bergh reaction was negative. A fragility test of the red corpuscles showed initial hemolysis at 0.42, complete hemolysis at 0.34.

"Jaundice" that was so unevenly distributed, did not color the sclerae, did not produce bile in the urine, and gave an icterus index of 33.3 and a negative van den Bergh reaction, it was reasoned, could not be a true jaundice. Dr. Matthews, one of our interns, suggested as a diagnosis carotinemia. This was in accord with all the observations and was supported by a further history from the patient of an unusual fondness for carrots, at least one cereal bowl full having been eaten every day for three months. Removal from the diet of the carotin-rich vegetables and fruits resulted in a marked improvement in one week, and complete disappearance of the pigmentation in six weeks.

COMMENT

Carotinemia in an adult is an uncommon condition and of interest only because of the possibility of confusing it with a true jaundice, and the necessity of recognizing its etiology in order that it may be cleared up. Pseudo-icterus and xanthosis diabetica are undoubtedly synonymous with carotinemia. It is not a disease but a harmless pigmentation which rapidly disappears with the elimination from the diet of the carotin-rich foods.

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RUPTURE OF THE RECTUM DURING PROCTOSCOPIC EXAMINATION *

CHARLES GOLDMAN, M.D., BROOKLYN

My interest in rupture of the rectum during proctoscopic examination was aroused when the case presented here came under my care:

History.—A white man, aged 44, a city fireman, married, was seen, Feb. 5, 1929, with the complaint of severe constipation, loss of appetite, general weakness, and a history of an attack of influenza three weeks previous to his visit. A general examination disclosed myocardial degeneration, a systolic pressure of 104 and a small quantity of albumin in the urine.

A proctoscopic examination showed a normal empty rectum. A diagnosis of postinfluenzal exhaustion and constipation was made and the patient was given an anticonstipation diet, told to take liquid petrolatum, and advised to rest and to spend a few hours each day in the sunshine.

Because the constipation was not entirely relieved by the liquid petrolatum and the diet, or for some reason not known to me, a nurse who was in attendance on another patient in the same building began daily colonic irrigations. On the advice of the nurse, a neighborhood physician with whom she was acquainted was called for medical advice.

February 20, the patient was ready to return to work fully recovered from his illness. The patient, at the request of the physician, went to his office for a final examination. When the physician, after a cursory general examination, introduced a proctoscope, the patient shrieked in pain and collapsed. He was rushed to his home and put to bed with a diagnosis of gas pains. After twenty-four hours of agony and several colonic irrigations under the physician's orders, the patient was transferred to a local hospital.

The essential facts of the further history are taken from the hospital history chart.

The patient died, February 27, as a result of general peritonitis.

The admission diagnosis was acute peritonitis, February 21; the chief complaint was pain in the abdomen. There was no history of blood in the stools or vomiting of blood. The urine was normal.

Examination.—The patient lay in bed with the legs flexed; he appeared acutely ill, and had an anxious expression on his face. The head was of normal contour. The pupils were equal and reacted to light and in accommodation. The throat was clear. Examination of the chest revealed shallow respiration but was otherwise negative. The abdomen was flat, and there was rigidity over the entire abdomen which was very tense at the lower part. Palpation could not be done owing to the rigidity and tenderness.

Operative Record.—A diagnosis of perforated viscus was made. During anesthesia the pulse was poor. The patient vomited black material.

1. The intestines throughout were severely inflamed and distended and covered with a fibrinous exudate.

2. The gallbladder, serous coat, was covered with petechial markings.

3. The abdominal cavity was filled with a large quantity of seropurulent substance.

4. The left pelvic space was filled with a large quantity of greenish white gelatinous pus.

5. There was a perforation about the size of a silver quarter (25 mm.) on the right anterior surface of the rectum about 6 inches (15 cm.) above the anus.

Operative Procedure.—Repair of the perforation was done, with drainage of the abdomen and of several loops of the intestine.

Autopsy.—The essential observations were myocardial degeneration, congenital cystic kidneys, bronchopneumonia, and normal bowel, except for a perforation of the anterior wall of the rectum about 6 inches from the anus.

COMMENT

On the advice of Dr. Edward C. Martin of Detroit, I attempted to complete my report by the addition of as many unpublished similar cases as I could collect. I soon found that the nature of the case prevented any great assistance from my colleagues. One patient, I knew, had come to a Brooklyn hospital within the last year. The surgeon in charge was unwilling that I see the chart. However, he supplied me with the following meager description of the case:

A man, aged 52, complained of cramps and diarrhea. Following proctoscopy, he complained of sudden severe pain, went into shock, and rapidly developed diffuse distention of the abdomen with tenderness. The patient was brought to the hospital within three or four hours and operated on immediately. At operation, a diagnosis was made of rupture of the rectum and a colostomy was performed. The patient died. No autopsy was obtained.

I wrote to a number of men doing proctology and asked them whether they knew of any unpublished cases of rupture of the rectum during proctologic examination. Two men replied that they each knew of a case but that they were not privileged to give information for publication. One man replied giving the details of a rupture of the rectum during proctoscopic examination in a case of ulcerative colitis.

CONCLUSIONS

1. The normal bowel may be ruptured with comparative ease.

2. The number of cases of rupture of the rectum during proctoscopic examination reported is only a small part of those which occur.

3. There is a necessity for insisting on at least as much instruction in the use of a proctoscope as is believed necessary in the use of a cystoscope.

1501 Union Street.

* Read before the American Proctologic Society, Detroit.

ASCARIS LUMBRICOIDES FOUND IN THE CAVITY OF THE HUMAN HEART *

Carl Boettiger, M.D., and Jacob Werne, M.D., New York

The case we are reporting is perhaps of interest more because of its oddity than of any scientific significance the observations may carry.

A woman, aged 65, born in this country, was admitted to the medical service of Dr. McLave at St. John's Hospital, Feb. 18, 1929. The only history obtainable, since the patient was irrational, was from her son. She was a tertipara who had borne her last child forty years before. She had had a swelling of her right leg for twenty years and had recently been complaining of pain in the left lower portion of the chest. She had been treated at the Metropolitan Hospital for ulcers of the leg during the six months prior to her admission to this hospital.

The patient was said to have become acutely ill the day before admission. She developed chills, fever, and the pain in the chest previously mentioned. There was no hemoptysis. Physical examination in the hospital revealed, as significant observations, crepitant râles over both lungs, distant heart sounds of regular rhythm, and elephantiasis of the right leg with ulcerations over the ankle. The temperature on admission was 100.4 F.; the pulse rate was 105, and respirations were 38. The chemical analysis of the blood was not remarkable. There were 4,100,000 red blood cells and 11,000 white blood cells, of which 67 per cent were polymorphonuclears and 33 per cent lymphocytes. No eosinophils were found. The urine contained a trace of albumin. Death occurred three days after admission. The clinical diagnoses were pulmonary thrombosis, chronic bronchopneumonia and elephantiasis.

The autopsy revealed cardiac hypertrophy, general arteriosclerosis, pulmonary thrombosis, chronic interstitial pneumonia, passive congestion of the lungs, liver and spleen, chronic interstitial pancreatitis, elephantiasis of the right leg with superficial ulcerations, and ascariasis. The immediate cause of death was pulmonary thrombosis.

The interesting feature of this case was the finding of two yellowish white worms with annular markings, measuring each about 10 cm. by 5 mm., in the cavity of the right ventricle. The first was found in the chicken fat clot in the cavity of the right ventricle, and the other was found to extend partly into the pulmonary artery. In view of the clinical diagnosis of pulmonary thrombosis, incision had been made into the right ventricle and pulmonary artery before the removal of the viscera *en masse*. No adult forms of the parasite were found in the intestine, which is the normal habitat of the mature worm.

The heart was markedly hypertrophied but did not show any valvular or endocardial lesions, aside from moderate arteriosclerotic thickening. The myocardium grossly did not show extensive scarring. Both lower lobes and the right middle lobe of the lung were the site of a marked induration and interstitial fibrosis, which will explain the finding of old thromboses, some with canalization. A fresh clot, adherent and granular, distended the wall of the vessel leading to the right middle lobe.

The worms were identified as forms of *Ascaris lumbricoides*. Because of the unusual finding, a brief survey of the literature on this subject was made, and disclosed several references to the finding of parasites in the cavity of the human heart, of which, however, so vague a description is given as to render them unauthoritative.

In this connection, it might be well to call to mind the accepted cycle of development of *Ascaris lumbricoides* in man. The larvae, liberated by the hatching of the eggs in the small intestine, are known to penetrate into the portal circulation. After a brief sojourn in the liver, they pass through the right heart into the lung and undergo further development in the capillaries. From there they pass to the air vesicles, up the tracheobronchial tree, down the esophagus into the stomach and small intestine, where they develop into adult worms. These parasites have been found in the biliary passages, in the pancreatic ducts, in the eustachian tube, in the lacrimal duct, in the genito-urinary tract and free in the peritoneal cavity, among numerous other locations. Whether in this case development occurred somewhere between the portal circulation and the pulmonary artery, or whether the adult worm had made its way into the cavity of the right heart, either ante mortem or post mortem, is a speculative question. Suffice it to say that the tendency of this parasite is known, and has been variously reported, to migrate into the most unusual situations in the body.

* Read before the Queens' County Medical Society, April 7, 1929.
* From the Pathological Laboratory of St. John's Long Island City Hospital.

SYSTEMIC BLASTOMYCOSIS

Theodore Toepel, M.D., Atlanta, Ga.

The case reported here is of interest on account of the rapidity with which blastomycosis progressed by the direct route along bones from the index finger to the upper arm, and by metastasis to the right lung, then to the left lung and finally to the left kidney.

The history dates back to Dec. 24, 1927, when the patient was pricked by a thorn on the left index finger while hunting rabbits. Papules appeared on all the fingers shortly afterward.

Jan. 12, 1928, a red spot was noticed on the index finger which developed into an abscess. The finger was lanced, January 18, 22 and 25, without relief.

The patient, a married man, aged 37, weighing 200 pounds (91 Kg.), came to me, Jan. 31, 1928. Physical examination was negative except for the infected finger, which was swollen to twice its size and of purplish glistening color. The blood and urine were normal. Roentgen examination revealed osteomyelitis, involving all the phalangeal bones, with considerable bone destruction of the distal phalanx. The finger was amputated, February 1, the second metacarpal bone was removed, March 3, and the arm was amputated at the middle and lower third of the humerus, March 13. The wounds were left open and tincture of iodine was freely used.

February 3 the presence of blastomycetes was definitely established in the pus of the finger and was again found in the hand and in an abscess on the upper arm. The blastomycetes were discovered in the sputum, April 2. This condition cleared up in ten days. When the patient left the hospital, April 25, there was no evidence of blastomycetes in the sputum or in the urine.

Laboratory observations are of interest, as they showed the rapid decline of the red blood cells from 4,960,000, January 31, to 3,800,000 by April 19; the white blood cells rose from 8,400, January 31, to 34,500 by March 31 and then dropped to 23,800 by April 19; lymphocytes dropped from 32 per cent, January 31, to 4, March 26, and then rose to 17 by April 19; polymorphonuclear neutrophils rose from 65 per cent, January 31, to 95, March 19, and then dropped to 81 by April 19; hemoglobin dropped from 92 per cent, January 31, to 75 by April 19. Two blood Wassermann reactions were negative; blood tularemia was negative. Special urine tests for iodine were positive, varying from + to + + +; albumin varied from a trace to + and the microscopic examination showed leukocytes, occasional hyaline casts, pus cells and blastomycetes.

A point of interest in this case is the absence of further involvement of the bone after the last operation, March 13, the metastasis to the right lung, April 2, and a clear lung without blastomycetes, April 15. When the patient left the hospital, April 25, he was able to walk to the automobile. A roentgenogram of his chest, taken at his home town and sent to me about the last of May, showed a large area involved in the left lung, and a week later the report sent to me told of the patient passing pus and suffering extreme pain over the left kidney. The patient died, June 22, 1928. The complete destruction of the left kidney was discovered at the autopsy; fibrous patches in both lungs and in the liver were present.

Potassium iodide was given by mouth, beginning February 3, a dosage of 20 drops of the saturated solution, three times a day, being increased daily until the patient was taking 120 drops three times a day. Fifteen grains (1 Gm.) of sodium iodide, in 20 cc. of solution was given daily intravenously. Tincture of iodine was freely used in the wounds, which were left open for this purpose, from February 1 to March 13. Laxatives and enemas were given as needed, and sedatives for pain. The stomach and body developed a tolerance for the potassium and other iodides, so that only on rare occasions was the dose reduced or discontinued.

Special Article

ABOLISHING DIABETIC COMA

E. P. JOSLIN, M.D.
BOSTON

Diabetes is a chronic disease, but diabetic coma is an acute disease. If this fact was recognized, deaths from diabetic coma should cease. It is high time they should cease for seven years have gone by since the discovery of insulin and the medical profession has been taught that insulin cures coma unless the patient is moribund. Why not abolish diabetic coma forthwith? This is the easiest and surest method of lowering diabetic mortality.

The diagnosis of diabetic coma depends largely on a history of its gradual onset. The patient has felt sick and looks and acts seriously ill rather than in collapse, as in insulin shock with tremor and sweating, unconsciousness or convulsions. Inquiry shows that insulin has been omitted or that the customary dose became inadequate, because the patient broke his diet or contracted an infection. Usually nausea, vomiting and pain, simulating serious abdominal disease, have led to the omission of food and in consequence the body has had nothing to live on except its own protein and fat and hence has developed acidosis. Gradually increasing restlessness, a deepening of the respiration into air hunger, but without cyanosis, and a change from drowsiness to coma develop, quite in contrast to the symptoms of insulin shock, whose onset is swift, complete and without difficulty in breathing. In coma the urine, obtained by catheter if necessary, contains sugar and acid; in insulin shock the urine is sugar free unless it collected in the bladder before insulin began to act.

TREATMENT

1. The treatment of coma is the treatment of an emergency and takes precedence over all else. The diagnosis once made, insulin should be injected every half hour subcutaneously, from 10 to 40 units or more, until returning consciousness, normal respiration and decreasing glycosuria demonstrate beginning recovery. If insulin is given intravenously, it should always be given subcutaneously as well.

2. Since the tissues of the patient are dehydrated, a liter (quart) of physiologic solution of sodium chloride should be inserted under the skin at once. It is dangerous in coma to trust to the retention of liquids by mouth or the absorption of salt solution by rectum. Intravenous injections are satisfactory, if given slowly to avoid distention of the heart.

3. The circulation should be stimulated with caffeine sodiobenzoate, 7½ grains (0.5 Gm.), given, if indicated, every hour for four doses.

4. The stomach should be gently washed out so that liquids will be retained. Useful liquids are water, broths, coffee, tea, gruels, and often most desirable of all for the first twenty-four hours, two or three glasses of ginger ale or the juice of two or three oranges—in other words, about 50 Gm. of carbohydrate. Thereafter one may return to the simpler articles of the regular diet, all the while regulating the dosage of insulin by tests of the urine at first every two hours, later lengthening the intervals to four or six hours. The dosage is 15 units of insulin for a red test, with Benedict's solution, 10 units for a yellow test, 5 units for a green test, but no insulin if the urine is sugar free. With measures such as these, recovery is almost certain unless the complicating disease is of itself fatal.

PREVENTION

Prevention is better than treatment. The patient should be trained to avoid coma. He should be told that he must not omit insulin as long as there is sugar in his urine, no matter whether he eats or does not eat. If he has an infection or fever, he must take more insulin and take it oftener. He must be made to realize the danger of breaking his diet. Ask him to repeat what he is to do if he feels sick:

1. Telephone the doctor.
2. Go to bed.
3. Drink a cupful of hot liquid every hour.
4. Get a nurse or a substitute.
5. Take an enema.
6. Keep warm.
7. Have boiled water on the stove ready for the doctor when he comes.

81 Bay State Road.

Council on Pharmacy and Chemistry

NEW AND NONOFFICIAL REMEDIES

THE FOLLOWING ADDITIONAL ARTICLES HAVE BEEN ACCEPTED AS CONFORMING TO THE RULES OF THE COUNCIL ON PHARMACY AND CHEMISTRY OF THE AMERICAN MEDICAL ASSOCIATION FOR ADMISSION TO NEW AND NONOFFICIAL REMEDIES. A COPY OF THE RULES ON WHICH THE COUNCIL BASES ITS ACTION WILL BE SENT ON APPLICATION.

W. A. PUCKNER, Secretary.

ISAROL-CIBA.—Sulphonated Bitumen, N. F.—A preparation obtained by dry distillation of bituminous shale. The distillate is sulphonated with sulphuric acid and subsequently neutralized with ammonium carbonate. The product complies with the standards for sulphonated bitumen, N. F.

Actions and Uses: See Sulphoichthyolate Preparations and Substitutes, New and Nonofficial Remedies, 1929, p. 398.

Manufactured by the Society of Chemical Industry in Basle, Switzerland (Ciba Company, Inc., New York). No U. S. patent. U. S. trademark, 97,007.

Isarol-Ciba is a reddish brown to brownish black syrupy liquid with a strong characteristic empyreumatic odor. It is soluble in water and in glycerin, and is miscible with fixed oils and fats. It is partly soluble in alcohol or ether, and entirely soluble in a mixture of equal volumes of these solvents. An aqueous solution (1 in 10) may be faintly acid or faintly alkaline to litmus paper. The addition of hydrochloric acid to this solution precipitates a dark resinous mass which is soluble in ether.

Incinerate a weighed portion of isarol-Ciba: the ash does not exceed 0.5 per cent. Dry a weighed portion on a water bath to constant weight: the loss is not more than 50 per cent.

Accurately weigh about 5 Gm. of isarol-Ciba, dissolve in 100 cc. of water, transfer to a distillation flask, add an excess of sodium hydroxide solution and distil slowly; collect the distillate (about 50 cc.) in 15 cc. of normal sulphuric acid; when the distillation is completed, titrate the excess of sulphuric acid with tenth-normal sodium hydroxide, using methyl orange as indicator: the amount of ammonia found is not less than 2.5 per cent. Accurately weigh about 1 Gm. of isarol-Ciba; transfer to a 100 cc. beaker and add 25 cc. of alcohol; stir thoroughly, filter, and wash the filter with a mixture of equal parts of ether and alcohol until the washings are clear and colorless; dry the residue on the filter at 100° C., cool, and wash the filter with 200 cc. of warm water slightly acidulated with hydrochloric acid; determine the sulphate in the solution by precipitation with barium chloride solution, and after washing, drying, igniting and weighing, calculate the results to ammonium sulphate: the amount found is not more than 8 per cent. Dry about 1 Gm. of isarol-Ciba on a watch glass to constant weight at 105 C.; pulverize the dried material and transfer about 0.5 Gm., accurately weighed, to a nickel crucible; add about 9 Gm. of sulphur-free sodium peroxide, and mix thoroughly; place the crucible carefully in a beaker containing cold distilled water, which should reach about halfway to the top; ignite the dry mixture in the crucible by thrusting a red hot iron wire through a hole in the cover of the crucible; after complete combustion has taken place, tip the crucible and allow the fused mass to dissolve in the distilled water; add hydrochloric acid in slight excess, heat to boiling, and determine the sulphate in the solution by precipitation with barium chloride solution, and after washing, drying, igniting and weighing, calculate the results to sulphur: the total sulphur should not be less than 10 per cent.

THE JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION

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SATURDAY, JULY 6, 1929

SOME EFFECTS OF FAULTY FAT METABOLISM IN DIABETES

That diabetes mellitus is not a disease of carbohydrate metabolism alone has been demonstrated by the careful quantitative chemical investigations of the past decade and especially by the study of the disease since the introduction of insulin. Beginning perhaps as a disturbance of carbohydrate metabolism alone, resulting from hypofunctioning of the pancreatic hormone, it remains a relatively innocuous disease as long as carbohydrate metabolism alone is at fault. In this state the patient may live out his normal span of life with a minimal amount of worry about his diet. The harmlessness of diabetes in this stage is attested by the frequency with which it exists and remains unsuspected and undetected until its presence is discovered by a chance urine examination. It is, indeed, difficult to say how deleterious the mere presence of an increased amount of dextrose in the blood and tissues may be. Even this useful and necessary substance may be harmful when constantly present in the tissues in unusually large amount, but there is no very good evidence that a high dextrose content in itself acts deleteriously. Blitzsten and Schram,[1] working at the Nelson Morris Institute in Chicago, showed that slight changes in the electrocardiogram were present in a fairly large proportion of patients with diabetes and that similar changes could be brought about in dogs by maintaining the blood sugar at a high level during the course of experiments. That hyperglycemia alone, the dextrose in high concentration acting possibly as a protoplasmic poison, is a factor in the causation of other changes in the cardiovascular system is problematic. That it is a factor at all appears doubtful because of the regularity with which the highly specialized renal tubular epithelium, which is so susceptible to poisons, escapes harm until a late period of the disease. The high dextrose content of the blood and tissues is probably chiefly responsible for the increased susceptibility of the diabetic patient to infection.

1. Blitzsten, E. P. W., and Schram, D. L.: Diabetes: Electrocardiographic Studies, Arch. Int. Med. **36**: 770 (Dec.) 1925.

Unfortunately, faulty carbohydrate metabolism is all too frequently not the only metabolic abnormality in diabetes. As the disease progresses the other two elements, protein and fat, of the metabolic triad are drawn into the field of abnormality and add to and finally even dominate the picture. The body, unable to obtain its necessary store of energy from the most readily combustible source, carbohydrate, attacks the protein not only of the diet but also of the body tissues, increasing through the dextrose formed from protein whatever harmful effect the abnormal dextrose content of the tissues may have, and leading, through destruction of body tissues, to the extreme state of inanition sometimes seen in rapidly progressing and uncontrolled diabetes.

Of greater evil consequence for the body as a whole than incomplete carbohydrate combustion or excessive protein breakdown is abnormality in the metabolism of fat. The latter apparently requires for its complete and normal combustion the fire furnished by the oxidation of carbohydrate, and not merely that supplied by the utilization of dextrose but the hotter blast of glycogenneogenesis and glycogenolysis. From the incomplete oxidation of fat there results a series of effects which dominate the clinical picture of diabetes and bring about pathologic and physiologic changes more serious than those which exist before fat metabolism becomes faulty. The increase in blood lipoids that leads to macroscopic lipemia was probably known to the observant clinician long before the days of quantitative clinical chemistry. The degree and persistence of the lipemia may be a measure of the severity of the disease. Rabinowitch,[2] working at the Montreal General Hospital and using the quantitative determination of cholesterol in the blood as a measure of the degree of lipemia, found a direct relation to exist between the progress and prognosis of the disease and the degree of cholesteremia. This was true in both children and adults. With no or only slight increase in blood cholesterol, the diabetes is usually easily controlled by simple attention to diet; with a moderate increase, insulin becomes necessary; at higher cholesterol levels, both insulin and extreme restriction of diet become necessary and may fail unless the patient is under constant observation.

Incomplete combustion of fat leads not only to changes that require chemical methods for their detection but also to morphologic tissue alterations. Fatty change of the myocardium is not a negligible factor in diabetes. Lipoid storage by the reticulo-endothelial system may lead to histologic changes simulating Gaucher's disease; what the physiologic effect of such storage may be is not definitely known. More serious for the patient is the effect of the persistent lipemia

2. Rabinowitch, I. M.: The Cholesterol Content of Blood Plasma in Diabetes Mellitus: A Statistical Study Based on Two Thousand Observations in Three Hundred and Eighty-Five Cases, Arch. Int. Med. **43**: 363 (March) 1929; The Cholesterol Content of the Blood Plasma in Juvenile Diabetes: A Statistical Study, ibid. **43**: 372 (March) 1929.

on the arterial system. Gangrene due to arterial obliteration is one of the frequent complications of diabetes. Borchardt [3] has shown that the arterial involvement is not characteristic of diabetes but, in its medial degeneration and calcification and in its intimal atheromatosis with lipoid infiltration, is identical with senile arteriosclerosis of the peripheral arteries. The arterial disease occurs at an earlier age and with greater frequency at later ages in the diabetic than in the nondiabetic person, as was pointed out by Borchardt from postmortem studies, and more recently by Morrison and Bogan [4] from roentgenologic study of calcification of the arteries. From the similarity of the arterial lesion in diabetes to the experimental aortic arteriosclerosis which can be brought about in rabbits by prolonged cholesterol feeding, resulting in cholesteremia, it is fair to assume that persistent lipemia is an important and determining factor in the arteriosclerosis that leads so frequently to gangrene in diabetes. The increased incidence of cholelithiasis noted in diabetes by Joslin [5] is probably to be correlated with lipoidemia. Incomplete fat combustion causes its most serious harmful effect in acidosis, which is the dread and often the terminal complication of diabetes. That disturbed protein metabolism may be a factor in the causation of diabetic acidosis does not minimize the importance of faulty fat metabolism, since it is probably through the formation of fat from intermediary derivatives that protein may have a ketogenic effect.

OLD AGE

The natural end of man is old age and death; all of life is but a preparation for this sequel. Few there are, indeed, who are willing to accept this dictum of nature. The struggle for youth is never ending and the useless hope for the miracle of rejuvenation is perhaps one of the impelling motives that animate the dying man to the end of his existence. The subject is one that has stimulated the philosophers since the earliest times. The latest contribution comes from Dr. Aldred Scott Warthin,[6] professor of pathology in the University of Michigan, who brings to the consideration of the subject a background of knowledge of pathology such as is possessed by few if any others who have written philosophically on old age.

The active life of the pathologist involves the study of effects of disease and wear on the structures of the human body. He knows all about the body, from its beginning to its end; he knows the variations of its structures in all the periods of life and the anatomic changes that they represent, and he uses this knowledge to interpret with the philosopher's mind the cycle of life. Warthin's study of the phenomena of old age and death is really a study of the cycle of human life. It is instructive and satisfying not only in its interpretation of the final period of life but also in its description and interpretation of life's whole cycle.

Warthin divides life into three major periods: the period of evolution, from conception to about the twenty-fifth year in the female and the twenty-eighth year in the male; the period of maturity, to about fifty-five and sixty-five, respectively; then the period of involution, which he would put in the individual who arrives at the end of intrinsic senile death at approximately ninety. His thesis is that this is the natural cycle of human life, an intrinsic quality of its vitality, and that it is beyond man's power to modify. The biologic purpose of life is reproduction, the continuation of the species for some future destiny, perhaps state of perfection, which we cannot glimpse, and that in this purpose "the individual machine is but a temporary, albeit necessary, incident in the life of the species, and the latter in its turn is also only an incident in the grand march of collective life through the eons."

Throughout the period of growth and even in maturity there are numerous structures, from the tail of the spermatozoon to such major structures as the thymus gland and the ovaries, that are destroyed and disappear when their uses have been fulfilled and their functions are no longer necessary. The placenta, Warthin emphasizes, is especially remarkable in its life history. "At the time of birth it is a senile structure repeating in detail the essential pathologic tissue changes that later are to appear in the major involution of the mature organism: sclerosis of arteries with obliteration, fibrosis of stroma, atrophy and degeneration of the chorionic epithelium, thrombosis, infarction of villi, calcification." He finally clinches his argument with this observation: "The point we wish to emphasize is that these early vascular changes are identical in kind with those of the arteriosclerosis of later life, but that they are associated with disuse and not with overuse. They cannot be explained on the basis of a *wear-and-tear* or *toxic* etiology." Old age, as revealed by Warthin, is the same purposeful process as the involution of these temporary structures, which he calls the minor involutions. "The main differences between the minor and major involutions are those of degree, purpose and the organ or tissue involved. . . . The major involution, senescence, affects all of the vital organs and functions, not for any purpose of further growth and evolution, but for the purpose of getting rid of the organism, itself, as a whole. This can mean but one thing: the individual human machine has fulfilled its function, and, now useless, stands in the way of the progressive evolution of the species. In other words, the minor involutions take place for

3. Borchardt, H.: Über die Veränderungen der Arterienmedia bei Spontangangrän und ihre Beziehung zum Diabetes, Virchows Arch. f. path. Anat. **259**: 521, 1926.
4. Morrison, L. B., and Bogan, I. K.: Calcification of the Vessels in Diabetes, J. A. M. A. **92**: 1424 (April 27) 1929.
5. Joslin, E. P.: Treatment of Diabetes Mellitus, Philadelphia, Lea and Febiger, 1928, p. 540.
6. Warthin, A. S.: Old Age, New York, Paul B. Hoeber, 1929.

the good of the single individual, the major involution for the good of the species."

This thesis is illustrated by the course of every living thing, from the insect which has a cycle of life measured in hours or the flower that lives through one blooming and seeding season, to the cycle of human life, and the cycles of animals which live hundreds of years. Obvious as the phenomena of the intrinsic life cycles are, men still try to avoid the idea that the aging process is normal and consider it rather as a progressive disease. Many great minds have been possessed, if not obsessed, by this idea. Brown-Séquard conceived of age as a disease characterized by the sclerotic changes in the vessels; Metchnikoff carried the idea one step further by explaining these vascular changes by intestinal putrefaction; Victor Horsley by degeneration of the thyroid gland; Lorand and numerous followers of his by degeneration of all the ductless glands. To these ideas Warthin comments: "The modern scientifically trained biologist, however, cannot look upon senescence and old age as disease processes but regards them as a physiologic entity, the result of involution processes inherent in the organism. . . . Age, the major involution, is due primarily to the gradually weakening energy charge set in action at the moment of fertilization, and is dependent upon the potential fulfilment of function by the organism. The immortality of the germ plasm rests upon the renewal of this energy charge from generation to generation."

Incidentally, Warthin pays attention to the currently exploited attempts at rejuvenation:

> More than thirty years after Brown-Séquard's first experiments made in 1889, in the direction of establishing a relationship between senility and the production of sex hormones by the sex glands, this subject has again come to the fore in the active controversy that has centered about the so-called rejuvenation produced by testicular transplantation (Voronoff) and ligature of the vas deferens of the testis (Steinach). An immense mass of literature has accumulated, with results so contradictory that positive statements one way or the other cannot be made at this time as to the real status of the questions of the regeneration of sexual activities by these methods of transplantation and ligation. If anything does result from these procedures it is quite evident that it is nothing more than a re-erotization, associated with certain evidences of increased energy of the general metabolism. There is no evidence that the transplanted testis produces any secretion by living cells; what effects are produced are the results of resorption processes. The most recent workers agree that the Voronoff operation, aside from the psychical influence on the patient, is without any specific effect, either on the sexual life or on the process of senescence. That there could possibly be any arrest of senility, or a rejuvenescence in the broad sense of restoration to youth by the Voronoff operation is in the very nature of things an absurdity. Age is a quality characteristic of all cells and tissues in the human body; the cell changes of age are irreversible. There has been no evidence offered to show that either the Steinach or the Voronoff operation has abrogated the cell changes of senility or has done anything more than to accelerate in some cases a dying sexual function and certain features of the general metabolism connected therewith. The only functions affected are those which depend upon sex hormones. In other words, the so-called rejuvenation produced by the sex hormones of the transplanted testis or by ligation of the vas is no rejuvenation in any sense of the word but a re-erotization wholly.
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> It is a sad commentary upon the mentality and character of the senile human male that he should seek such a re-erotization of his failing function. Such a process is not without its hazards; it is another example of the dangers of putting new wine into old bottles, as has been shown by the sudden deaths of a number of re-erotized old men. The question of the effect of ligating the vas deferens, whether due to increased hormone production by the interstitial cells, as Steinach supposes, or to the resorption of the products of decomposition of the seminal epithelium, as claimed by other observers, cannot be said to be fully settled, although evidence is accumulating to the effect that the interstitial cells are not glands of internal secretion but represent specialized reticuloendothelial cells concerned in lipoid metabolism, and bearing in their size and prominence an inverse relationship to the function of spermatogenesis. We may therefore be assured that there is no rejuvenescence possible for the senile individual and that the idea of physical rejuvenation is but a myth of ancient lineage disguised in quasiscientific garments.

The view of life, old age and death that has been presented may seem depressing to one who longs for physical immortality. Some of Warthin's sentences, for example, taken alone, must give this impression. "From now on to the end of the third (the last) act he [the actor in the play of life] must portray the picture of gradually flagging desire and failing powers, of disillusionment, fading pleasures, in other words, the portrayal of senescence, until his rôle ends in ultimate death." But as a matter of fact the philosophy of his book is not pessimistic and its effect is not depressing. It has the cheerfulness and optimism that come from a courageous and honest facing of facts. "But if age is inevitable, what shall be done about it? Meet it, of course, with courage and common sense, as something in the day's work, not pleasant wholly, but as the final turn of the screw, to be endured with that fortitude that in enduring acquires a quality of satisfaction. Moreover, the possibilities of normal old age are great; it is the period of ripeness of experiences and observation, of the contemplation and philosophical evaluation of the world about us, of quiet brooding and the creative possibilities engendered by such. . . . Since the mental powers are preserved longer than any other function in senescence, happy is that man who comes into his old age with the capacity for intellectual pleasures fully developed, not in one line alone, but in many, in literature, art, music and science." The book ends with the pertinent and beautiful quotations from Cicero, Harvey and Goethe:

> "Whatever is natural must be accounted good. When death comes to youth, Nature is up in arms and revolts. Yet, to old men, what is more natural than dying?"—Cicero: De Senectute.
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> "The eternity of things is connected with the reciprocal interchange of generation and decay; and as the sun, now in the east and then in the west, completes the measure of time by his ceaseless revolutions, so are the fleeting things of mortal existence made eternal through incessant change, and kinds and species are perpetuated though individuals die."—William Harvey: De Generatione.
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> Keine Kunst ist's, alt zu werden, Es ist Kunst, es zu ertragen. —Goethe.

To grow old gracefully—that must be enough for any man.

THE MECHANISM OF FAT ABSORPTION

Most writers who deal with the mode of absorption of fat from the alimentary tract are at present inclined to the view that it is disintegrated by lipolytic enzymes into fatty acids and glycerol before it penetrates the intestinal barrier.[1] As the lymph stream that carries the products of absorption away from the intestine contains neutral fats, it is assumed that a resynthesis of the liberated fatty acids to fat occurs somewhere along the route between the lumen of the bowel and the lymphatic channels. One would expect the locus of such changes to be in the cells of the intestinal mucosa. Sinclair [2] has pointed out that the resynthesis of fat is assumed tacitly to be simply a reversal of the hydrolysis which takes place in the lumen of the intestine; that is, it is enzymic in nature. Nevertheless, attempts to demonstrate in vitro the synthesis of fat from its split products in the presence of hashed mucosa have been either inconclusive or definitely unsuccessful. As the mucosal cells always contain phospholipids, it has also been thought that they might be an intermediary stage in the resynthesis of fat from its absorbed constituents. If this is true, the phospholipids of the mucosa, and more particularly their constituent fatty acids, should assume the characteristics of the fat that is being absorbed.

A test of the hypothesis has been attempted at the University of Rochester School of Medicine and Dentistry by Sinclair. The general plan of the experimentation was to feed a fat of pronounced characteristics and to observe the effects on the amount and nature of the phospholipid of the intestinal mucosa. The experiments have shown that whereas there is no significant change in the phospholipid fatty acid make-up of the muscular structures either in the intestine or elsewhere in the body during the absorption of fat, there is a pronounced change in the composition but no change in the amount of the phospholipid fatty acids of the intestinal mucosa and of the liver. Apparently there is an incorporation of absorbed fatty acids into the phospholipids of the intestinal mucosa. According to Sinclair's view, within the epithelial cells of the intestinal mucosa there is a "specific" phospholipid which occupies an intermediary position between fatty acids and neutral fat. It is an invariable characteristic that the amount of phospholipid remains constant. As soon as fatty acids are absorbed into the epithelial cells, molecules of the "specific" phospholipid react with the free fatty acids (or soaps) to form neutral fat; immediately, however, the phosphoric acid-base complex unites with absorbed fatty acids and glycerol to form phospholipid, thereby maintaining the amount constant. The synthesized molecules of neutral fat, being insoluble in the cell fluids, coalesce and form the droplets that are so typical of the process of fat absorption. In this manner the neutral fat is made inactive, and the reaction proceeds until all of the absorbed fatty acids have been synthesized into neutral fat.

Despite the suggestiveness of the theory of successive fat cleavage and resynthesis prior to and during absorption, one cannot entirely disregard the indications furnished by Mellanby that neutral fat emulsified with bile is freely absorbed from the duodenum into the lacteals of animals in which both the pancreatic duct and the biliary duct have been ligatured. Perhaps, after all, some emulsified fat can pass freely into the columnar cells of the villus without previous hydrolysis into fatty acid and glycerol.

1. The subject is reviewed by Bloor, W. R.: Physiol. Rev. **2**: 92 (Jan.) 1922.

2. Sinclair, R. G.: The Rôle of the Phospholipids of the Intestinal Mucosa in Fat Absorption, J. Biol. Chem. **82**: 117 (April) 1929.

MANUFACTURED WEATHER

The so-called present high standard of living, which contrasts so markedly with that of a generation ago, depends for its maintenance on circumstances arising in large scale production and standardization. Perhaps no more striking characteristic of modern industry can be mentioned than its gradually developing independence of nature. It is only by the assurance of dependable uniformity in supply of raw material, in transportation and in mechanical power that quantity production with the net gain to the consumer has been made possible. One of the factors of large importance to many industrial processes is grouped under the term "atmospheric conditions." In a recent account Lindsay [1] has described the rise of the new ventilation engineering and has pointed out the wide application already made of this specialty in a variety of industries.

The temperature, moisture and movement of air are of considerable importance in many manufacturing processes; in the past, the location of mills frequently depended on the prevailing atmospheric conditions of a region. The situation is now largely changed and, by the use of the newer methods of air conditioning, materials can be dried or made moist, rapidly or slowly at any temperature desired. Such procedures as the drying of pottery, the curing of tobacco and the moistening of leather for the uppers of shoes are now in many plants dependable and under perfect control, requiring far less time and floor space and resulting in a more uniform product with less breakage and spoilage than with the older methods. The manufacture of rayon, of which 98,000,000 pounds was made in the United States last year, requires controlled air conditions throughout the process. The milling of the finest grades of flour involves an accurate adjustment of temperature and moisture conditions in the atmosphere, while the processing, wrapping and sealing of many of our food products is possible on a large scale only because the air in the factories is "manufactured" to order.

1. Lindsay, D. C.: J. Indust. & Engin. Chem. **21**: 502, 1929.

It is obvious that, when the air of a manufacturing plant is conditioned, the persons employed are benefited. Since happiness and efficiency are increased when people are physically comfortable, many installations of air-conditioning apparatus have been made for this purpose alone. Furthermore, uniform air conditions during working hours tend to minimize the economic and industrial losses from the common so-called respiratory diseases. The use of cleansed, cooled and dehumidified air in summer and of warmed and properly humidified air in winter cannot but add to the enjoyment of a performance in a movie theater.

While modern industry is thus increasingly availing itself of the products of scientific research, the effects on the individual employee are not always so beneficial as in the case discussed; indeed, the circumstances surrounding the manufacture of certain widely used products may constitute an industrial hazard of the most dangerous type. Only recently attention has been directed in these columns [2] to the insidious effects of the radiations from radium paint used to letter watch dials, speedometers and similar pieces of apparatus. The outlook for those affected is so hopeless that renewed emphasis should be given to the tremendous importance of enforced prophylaxis, and nothing should be left to chance or perfunctory advice. The fabric of modern society is so complex that progress made in one direction usually necessitates readjustments, not all of which are happy.

Current Comment

THE SIGNIFICANCE OF THE KAHN REACTION

Physicians are at times in a dilemma when considering the diagnostic significance of tests for syphilis. Aside from the innumerable modifications of the Wassermann test, there are in use today a considerable number of precipitation tests. The bringing together by the League of Nations Health Committee [3] of the authors of methods or of modifications and having them examine the same serums with their respective methods was an important step in assessing the value of various tests. The Kahn test evidently stood out in the four criteria for a good method; namely, practicability, specificity, sensitiveness, and clear-cut reactions. Only a few years ago this test was looked on with academic interest, the belief being still prevalent that it would be impossible for any test to replace the well established Wassermann test. The wide use which the Kahn test has been attaining in this country and abroad is clearly justified in view of the superior results that it gave at Copenhagen in comparison with other internationally known tests for syphilis. Because of the importance of laboratory tests in the diagnosis and the treatment of syphilis, it was natural that the acceptance of the Kahn test by clinicians should have been slow. From now on, however, this test will undoubtedly attain still wider use.

2. Radiosensitivity of Bone, editorial, J. A. M. A. **92**: 1447 (April 27) 1929.

3. Report of Second Laboratory Conference on Serodiagnosis of Syphilis, Geneva, League of Nations Health Organization, 1928. See also General News, THE JOURNAL, June 22, 1929, page 2111.

THE PHYSIQUE OF MEN OF SCIENCE

There is a widespread impression that those persons who should be most familiar with the fundamental principles that make for human well being are all too often indifferent to their implications. Physicians who devote much of their time to the inculcation of the dictates of personal hygiene are as a class prone to neglect in their own daily lives the practices of healthful living that they insistently impose on others. Scholars in many walks of life are often assumed to be seemingly forgetful of the adage mens sana in corpore sano. The cartoonist is more than likely to represent the typical college professor as a person of frail structure who appears to struggle through life with the self-imposed handicap of a neglected body. Pasteur remarked that science should be the highest personification of nationality because, of all the nations, that one will be foremost which shall be first to progress by the labors of thought and of intellect. Such eminence is not likely, however, to be achieved by physical weaklings. Fortunately, observations that have lately been completed by Aleš Hrdlička [1] of Washington give no occasion for the traditional beliefs about defective or inferior physiques, at least so far as American scientists are concerned. He has carefully measured without choice a hundred members of the National Academy of Sciences. This represents about half of a membership rigidly selected from among the foremost representatives of the different sciences. They are, therefore, a selected group of high-class brain workers. The most striking fact brought out by Hrdlička's examination is that these men, barring rare exceptions, are in no way inferiors but rather superiors in physique, strength, health and longevity, as compared to the American and even the Old American population at large. It is decisively not a case of strong minds in weak bodies but of strong minds with strong constitutions. Furthermore—and this Hrdlička regards as especially significant—the head (and hence presumably also the brain) of the members of the academy exceeds in size not only that of the population at large but even that of the well educated and professional Old Americans. It is clear, he adds, that outside of the prevalence of above-the-average physique and above-the-average size of head, the highly talented men of science conform in their traits with the racial groups to which they belong. One may conclude, with the Washington anthropologist, that in all probability, in science at least, the strongest and ablest healthy minds go generally with strong, healthy bodies; that intensive, prolonged mental work is concomitant with larger-than-average head and brain, and, finally, that such intensive mental work evidently does not tend toward a shortening of the life of the workers. Perhaps this will at last dispose of the conventional belief that an eminent man of science is a person one-sided in mind, with a frail or neglected body.

1. Hrdlička, Aleš: Measurements of One Hundred Members of the Academy and What They Show, Science **69**: 503 (May 10) 1929.

Association News

MEDICAL BROADCAST FOR THE WEEK

The American Medical Association Morning Health Talks and Evening Health Hints from Hygeia

The American Medical Association broadcasts daily at 11:15 o'clock in the morning, central daylight saving time, over Station WBBM (770 kilocycles, or 389.4 meters).

The program for the week of July 8-13 will be as follows:

July 8. "Medical News," by Dr. J. F. Hammond.
July 9. "Why Fear an Anesthetic?" by Miss Mildred Whitcomb.
July 10. "Mental Fatigue," by Miss Lois Stice.
July 11. "The Girl Who Grew Up Too Soon," by Miss Mildred Whitcomb.
July 12. "Medical News," by Dr. J. F. Hammond.
July 13. "Hunger and Thirst," by Mr. Cecil Bean.

Evening Health Hints from Hygeia, 8 o'Clock, Central Daylight Saving Time

July 8. Skimmed Sunshine.
July 9. Purifying Cannery Waste.
July 10. Economic Factors Help Bring on Tuberculosis.
July 11. Garlic Scents Breath for Seventy-Two Hours.
July 12. Shyness is a Mental Disease.
July 13. College Students Must Learn How to Eat.

Medical News

(PHYSICIANS WILL CONFER A FAVOR BY SENDING FOR THIS DEPARTMENT ITEMS OF NEWS OF MORE OR LESS GENERAL INTEREST: SUCH AS RELATE TO SOCIETY ACTIVITIES, NEW HOSPITALS, EDUCATION, PUBLIC HEALTH, ETC.)

CALIFORNIA

Chiropractor Given Life Sentence.—Arthur O. Berg, a chiropractor of Los Angeles, after serving eight months in San Quentin Penitentiary, returned to Los Angeles in May for a new trial, the decision of the lower court having been reversed. Berg pleaded guilty to a charge of manslaughter as a result of criminal abortion which resulted in the death of a 15 year old university student. He withdrew his plea of guilty but was convicted at the second trial and sentenced to life imprisonment at San Quentin (THE JOURNAL, Sept. 15, 1928, p. 806).

Dr. Bolt Goes to Western Reserve.—Dr. Richard A. Bolt, assistant professor of child hygiene and lecturer in pediatrics, University of California, has resigned to accept an appointment as director of the Cleveland Child Health Association, associate professor of hygiene and public health, Western Reserve University, Cleveland, and associate in preventive pediatrics at the medical school. Dr. Bolt has been at the University of California since 1925. He is a graduate of the University of Michigan Medical School and of Johns Hopkins University School of Public Health.

Society News.—The Northern California Medical Golf Association held a tournament at Sonoma Mission Inn, June 15. Suggestions as to future tournaments should be made to Dr. Harry E. Alderson, 490 Post Street, San Francisco. ——The National Research Council has given about $1,500 to the University of California for sex research to be carried on by Dr. Herbert M. Evans.——The attendance at the recent state medical meeting at Coronado exceeded any previous registration by 302.——Six lepers from California were sent to the national leper home at Carville, La., May 15. Four of them were from San Francisco, one from Oakland and one from Los Angeles. Since 1922, California has sent eighty-eight lepers there, nearly all of whom were Mexicans and Orientals.

Leprosy Organism in Man and Rat.—In addressing the Western Society of Naturalists at Berkeley, Ernest L. Walker, S.D., professor of tropical medicine, University of California Medical School, expressed the conclusion that the organism causing leprosy in man is identical with the organism causing leprosy in rats. It belongs, he said, among *Actinomyces*. Since the leprosy bacillus was discovered in 1871 by Hansen, its artificial cultivation has been unsatisfactory, producing usually forms having apparently no relation to the bacillus found in the lesions. The organism is not a simple bacterium, Dr. Walker said, but it assumes a variety of forms during its life history. He believes that the actinomyces of leprosy is a saprophyte which lives in the soil and only by chance becomes a parasite on gaining admission into man. Stefansky in 1903 found that a disease exists in rats closely similar to leprosy in man. Dr. Walker said they have been able to cultivate the rat organism and have found it to be an actinomyces. They inject rats regularly with these cultures and have recovered the organism after more than a year. Although their series of rats amount to hundreds, a case of cutaneous lesions has not yet been produced. Their research, he believes, will throw light on human leprosy and provide a means of proving the etiologic relation of the soil actinomyces to the disease.

Personal.—Dr. Jacob Schwarz, San Francisco, is reported to have been willed $6,500 by the late Helene Brock, aged 70, of New York. Dr. Schwarz attended Miss Brock when she was ill in San Francisco in 1925.——Dr. Rupert G. Doupe has been appointed health officer of the city of Tehachapi to succeed Dr. Clara M. S. Rinehart.——Dr. Ray Lyman Wilbur, Secretary of the Interior, gave the commencement address at Stanford University, June 17; 1,071 degrees were conferred, the class being the largest in the history of the university.——Karl F. Meyer, Ph.D., professor of bacteriology and director, Hooper Foundation for Medical Research, University of California, has gone to Europe to study malta fever and public health problems in the canning industry.——Robert G. Sproul, vice president and comptroller of the University of California, has been made president of the university, effective July 1, 1929, on the retirement of Pres. William W. Campbell, LL.D. Dr. Sproul is 38 years of age, a native of California, a graduate of the university in civil engineering and has the degree of LL.D. conferred by Occidental College.——Dr. Edgar Van Norman Emery has resigned as director of the Los Angeles Child Guidance Clinic to accept a position at the newly organized Institute of Human Relations at Yale University, New Haven, Conn. ——John F. Kessel has been appointed associate professor of bacteriology and parasitology at the University of Southern California School of Medicine.

How Many Physicians Are Licensed?—The new edition of the American Medical Directory, which has just been completed, contains the names of 168,201 physicians who are licensed in the United States and its possessions and Canada. In this number are about 12,000 names which did not appear in the edition published two years ago. The actual increase in names over the preceding edition of the directory is, however, only about 4,199, because of the fact that nearly 7,000 have died since the tenth edition was published.

GEORGIA

Changes in Medical Faculty.—The president of the board of trustees of the University of Georgia has announced the appointment of Dr. James E. Rush as head of the department of public health, effective at the beginning of the next school year, and of Dr. Erich W. Schwartze as head of the department of physiology, succeeding Dr. William Salant, resigned. Dr. Rush is doing graduate work at Yale University; previously he was professor of public health at the University of Kentucky, Lexington. Dr. Schwartze comes to Augusta from the University of Pittsburgh.

Society News.—The Fulton County Medical Society was addressed, June 20, by Drs. Hal C. Miller on "Pyloric Obstruction Following Appendectomy"; Madison Hines Roberts, on "Breast Milk," and William L. Champion and Major F. Fowler on "Gonorrheal Arthritis."——Dr. Charles T. Nellans has resigned as chief physician at the United States Federal Penitentiary, Atlanta, to devote his time to private practice. ——The Fulton County Medical Society was addressed, June 6, by Dr. Charles W. Roberts on differential diagnosis of acute appendicitis; Dr. John B. Fitts, "New Ideas of Food and Nutrition," and Dr. Frank K. Boland, mortality of acute intestinal obstruction.

Tuberculosis Facilities Inadequate.—The tuberculosis situation of Atlanta and Fulton County has been improving for years, but the facilities are considered still inadequate. The *Bulletin* of the Fulton County Medical Society says there is a waiting list at Battle Hill of more than 200 and at Alto of about 150, and it requires months to get a patient into these institutions. The tuberculosis death rate in Fulton County in 1928 was 146.2 per hundred thousand of population. The local tuberculosis association believes Atlanta should have a nursing home where patients could be sent to have the advantage of a sanatorium and at the same time be treated by their own family physician

if they desire. Good work is being done at present among the children and it is believed that the general tuberculosis situation will continue to improve. The cooperation of the practicing physicians of the county is requested.

ILLINOIS

Community Celebrates General Practitioner's Birthday.—Hundreds of friends gathered in the gymnasium of the high school at Mount Zion, June 9, for a banquet to celebrate the seventieth birthday of Dr. Sheffie R. May, who has practiced there about forty-two years. This appreciation of Dr. May's service to this community was sponsored by the Commercial Club and was attended by friends from outlying districts where the guest of honor had often gone to serve them. Dr. May was presented with a watch and chain, and Mrs. May with a diamond brooch. The number present may be estimated from the fact that 35 gallons of ice cream was served.

Personal.—Dr. Edward S. Murphy, Dixon, has been elected president of the Alumni Association of Rush Medical College for the ensuing year.——Dr. Herman L. Horwitz has resigned his position as assistant medical director of the Cook County Tuberculosis Hospital, Oak Forest, effective July 5.——After nearly ten years' service as health commissioner of the city of Rock Island, Dr. Albert N. Mueller, has resigned and announced his retirement from the general practice of medicine, in which he has been engaged for about twenty-two years. His successor will be Dr. Ralph Dart, who was health commissioner previous to the time that Dr. Mueller was appointed. Dr. Dart has been practicing in Rock Island since 1904.

Chicago

Personal.—Dr. Otto F. Kampmeier has been appointed head of the department of anatomy of the University of Illinois College of Medicine to succeed the late Prof. Victor E. Emmel. ——Dr. Zoia Tschoumacova, recently of Chicago and formerly in practice in San Francisco, has accepted a position on the medical staff of the Northern Colony and Training School at Chippewa Falls, Wis.——Dr. Robert A. Black, professor of pediatrics, Loyola University of Medicine, will have charge of the new $300,000 La Rabida Sanatorium in Jackson Park, which will soon be under construction. The sanatorium will care for children who have heart disease.——Dr. Egil T. Olsen, who resigned as superintendent of the Englewood Hospital about four months ago, has been appointed superintendent of the Receiving Hospital, Detroit.

From Gongs to Sirens.—The Chicago School of Sanitary Instruction, whose bulletin is edited by the city health commissioner, devotes a recent issue to noise as a menace to health. Tests made on normal subjects, it is said, showed that 19 per cent more energy was required to perform certain duties in noisy locations than was required to perform them in quiet locations. Noise that is not sufficient to wake a sleeping person will cause his muscles to remain tense as long as thirty minutes. Sleep under such conditions is not refreshing. Sanitary engineers have made tests in Chicago by means of the audiometer, an instrument which determines the volume of noise in any locality on a percentage basis. The continuous sound or community noise which they found in various localities varied from 8 to 10 per cent in the country to 15 per cent in the suburbs; from 25 per cent in residential districts to 35 per cent in industrial districts, and up to 40 per cent in the loop. The increase in noise in Chicago is further shown by the fact that it has become necessary for the fire and police departments to use sirens, while five years ago they used gongs. Noise is now a serious problem. Several hospitals are considering moving to quieter areas, and the number of protests received by city authorities against noises is increasing each year. The Chicago School of Sanitary Instruction is conducting studies with a view of presenting details to the legislature for the enactment of laws which will aid in controlling unnecessary noise.

KENTUCKY

Society News.—Dr. James Vernon Pace, Paducah, has been elected president of the Southwestern Kentucky Medical Association for the ensuing year.——The Bourbon County Medical Society, Paris, was addressed, May 9, on "Toxemias of Pregnancy" by Dr. Scott D. Breckinridge, Lexington.——Dr. William F. King, Indianapolis, secretary, Indiana State Board of Health, addressed the Fountain-Warren County Medical Society, Covington, June 6, on "Undulant or Malta Fever." This was the annual "Wabash River catfish dinner" meeting.——Dr. Clarence J. Broeman, Cincinnati, addressed the Scott County Medical Society, Georgetown, June 6, on "Treatment of Cancer of the Fundus."——The model of the statue of Dr. Ephraim McDowell, which was placed in the Capitol Building at Washington a few months ago, has been procured by the Kentucky State Medical Association, and will be installed in the capitol at Frankfort.——Dr. Gordon B. Underwood, Evansville, Ind., conducted a skin clinic before the Daviess County Medical Society, Owensboro, June 11, and addressed the society at a banquet.

MASSACHUSETTS

Esculapius' Family on the Stage.—A play entitled "Esculapius," written by Dr. Barbara Ring of Arlington Heights, was staged, June 23, on the occasion of the fiftieth anniversary of the Ring Sanatorium and Hospital. The time was 1329 B. C., the place, Epidaurus, Greece, and the setting the Temple of Esculapius, dedicated to Apollo. Among the characters were the daughters, Panacea and Hygeia, the mother Epione, and the sons, Machaon and Podalirius. Apollo's part was played by the well known actor Alan Hamilton. The play depicts the practice of medicine in ancient times and portrays the ideal physician Esculapius, on whom the god of the lower world reaped vengeance for restoring the sick and thus withholding their shades. Apollo then comes to earth and raises Esculapius to the realms of the gods and dedicates to his followers his staff, the caduceus, which remains to this day the symbol of the profession. The principal parts in this presentation were taken by Boston professional and amateur players who were assisted by the choruses from the Arlington and Belmont women's clubs. It was presented in the open garden of the Ring Sanatorium before an audience of 1,200.

MINNESOTA

Personal.—Dr. William J. Mayo, Rochester, received the honorary degree of doctor of science from Marquette University, Milwaukee, June 12, on which occasion he delivered the commencement address.——Dr. Fredolph H. Magney has been elected chief of staff of St. Luke's Hospital, Duluth, for the ensuing year.——Dr. Charles H. Mayo, Rochester, will address the British Medical Association at Manchester in July on "The Mechanism of Abdominal Pain."

Club Proposes Postage Stamp to Commemorate Morton.—At a meeting of the Exchange Club of Duluth, June 10, a resolution was adopted requesting that the U. S. Post Office Department commemorate the name and achievement in the forthcoming new series of postage stamps of William Thomas Green Morton, Boston, who, the resolution says, "discovered and promulgated the anesthetic effects produced by the inhalation of sulphuric ether."

Society News.—The Southern Minnesota Medical Association spent the afternoon of June 15 on the Mississippi River near Winona; at the dinner Dr. Arthur R. Metz, Chicago, presented motion pictures of big game hunting in Africa. Other speakers were Drs. Hans M. Lichtenstein, Winona, on injection treatment of varicose veins, and Everett K. Geer, St. Paul, on iodized oil in the diagnosis of thoracic conditions. Clinics were held by Drs. James T. Christison and Ernest M. Hammes, both of St. Paul, and by Dr. Owen H. Wangensteen, Minneapolis.

Horsley Prize Awarded to Dr. Horton.—The John Horsley Memorial Prize for 1929 has been awarded to Dr. Bayard T. Horton of Rochester, for a thesis entitled "A Study of the Pyloric Block with Special Reference to Musculature, Myenteric Plexus and Lymphatics." The prize, given by Dr. John Shelton Horsley of Richmond, Va., is awarded biennially by a committee of the University of Virginia Faculty to medical graduates of the University of Virginia of not more than fifteen years' standing for a thesis representing original work on some surgical subject. The prize consists of the income for two years from a gift of $10,000, and amounts, therefore, to about $1,000. Theses in competition for the next award must be received by the chairman of the committee, Dr. Edwin P. Lehman, University, Va., by Feb. 1, 1931.

NEW HAMPSHIRE

Another Kind of Behavior Clinic.—The first behavior clinic on the mental hygiene program of the state board of health was held at Durham, June 5, in connection with a regular conference for babies and children of preschool age conducted by the maternity, infancy and child hygiene division. Sixty-six children attended the conference. This new work is to assist parents to avoid bad mental habits in children. After the children were physically examined, they were passed on to the psychologist. The state board says that almost without exception parents approved this work, and that most of them had problems which they wished to discuss with the psychologist. It is planned to hold these clinics throughout the state. Follow up work will be done by nurses. The physical exam-

inations at the first clinic were conducted by Drs. Albert E. Grant, Durham, and Franklin N. Rogers, Manchester, and the behavior clinic by Dr. Anna E. C. Rudd, Durham, and Mrs. E. A. Phillips, psychologist to the University Nursing School.

NEW YORK

Society News.—The Medical Society of the County of Albany was addressed, June 26, by Dr. Philip L. Forster, Albany, on "The Orr Treatment of Osteomyelitis."——The Fulton Academy of Medicine has appointed a committee to inaugurate a memorial day for deceased physicians. The emblem for marking their graves will be the caduceus.

Facing an Enormous Mental Problem.—In seven years the people of New York have approved bond issues totaling $150,000,000 to provide care for their people who are mentally ill. Now the governor is urging the legislature to permit another $50,000,000 bond issue to go before the people this fall. There is said to be one mentally ill person in every five families in the state. During 1928, there were under treatment, in the fourteen civil state hospitals for the insane, 58,354 patients in addition to the 9,124 in the four state schools for mental defectives and the 1,890 in the institute for epileptics. Overcrowding in some of these hospitals is said to be shocking, amounting, on April 1, to 10,625. While the state is building the largest hospital for mental patients in the world at Brentwood in Suffolk County (eighty buildings will eventually be erected), several years will elapse before this entire facility will be available. This hospital, which was named in honor of Dr. Charles W. Pilgrim, will cost about $30,000,000 and accommodate 10,000 patients. Governor Roosevelt has considered calling a special session of the legislature to provide for another bond issue, and a committee of the legislature has been inspecting the state hospitals. The committee seems to hold the opinion that sufficient funds have already been made available by the legislature through the two bond issues and appropriations from current revenue to house properly and care for the patients. The committee believes there has been an unwarranted delay in the state architect's office in carrying forward new construction. It pointed out instances wherein four years had elapsed after the money was provided before the beds became available.

New York City

Personal.—A portrait of Dr. Max Rosenthal, dean of the staff of Sydenham Hospital, was presented to the institution, June 13.——Dr. Haven Emerson, professor of public health administration, Columbia University College of Physicians and surgeons, gave a series of addresses, June 5, under the auspices of the Mahoning County Medical Society, Youngstown, Ohio.——Dr. James J. Walsh, who has been reelected president of the Catholic Writers Guild of America, guest of honor and principal speaker at the annual banquet of St. Louis University, St. Louis, June 3.

Oldest Hospital Has a Deficit.—The New York Hospital, whose charter was granted in 1771 by King George III of England, recently celebrated its one hundred and fifty-seventh anniversary. The annual report showed that during 1928 the hospital operated at a deficit of $163,264. About 45 per cent of its ward service was given free to needy patients, and about 40 per cent of its outpatient service. The New York Hospital, in cooperation with Cornell University, has just started construction on a great medical center on the East River, to which it will move when the buildings are finished.

Health Department Hopes to Abandon Clinics.—In conducting the campaign to eliminate diphtheria, the city health department has found that parents who would prefer to pay a small fee to have their children immunized by a private physician take them to one of the special stations maintained by the department because they fear that the physician's fee might be too high. The Diphtheria Prevention Commission with the cooperation of the New York County Medical Society will circularize physicians in Manhattan to ask whether they will set aside certain hours to give toxin-antitoxin to children for $2 an injection. The health department prefers to have these immunizations done by private physicians. It hopes the profession will assume this and other similar responsibilities and thus make possible the gradual abandonment of many of the clinics, health stations and other activities which the department feels it has been compelled to establish to meet the present situation.

Fraudulent Health Inspector Bibeau Imprisoned.—For several months Joseph Bibeau, an imposter, went about representing himself as an inspector of the New York City Department of Health, victimizing restaurateurs, barber shops and beauty parlors by collecting $10 for the renewal of their permits. When first arrested sometime ago on Staten Island, Bibeau was released on bail and he immediately resumed his illegal operations in other parts of town. He was rearrested in May and found guilty and was sentenced, June 3, to the workhouse for an indeterminate sentence which means, it is said, from six months to three years. Bibeau's record showed that he had served prior jail sentences. A letter from the Ohio State Medical Board in 1920 stated that one Joseph Percy Bibeau was licensed to practice electrotherapy, and was then located in Cleveland. There is also on file a clipping from the Cleveland *Plain Dealer* in 1914 of an advertisement of "Dr. J. P. Bibeau, 229 Colonial Arcade, to remedy flat noses, hollow cheeks, and falling hair." This Mr. Bibeau was born in France.

Quack Goldenberg Convicted.—Salvi Goldenberg, who dubs himself "Professor," was convicted in Special Sessions Court, New York County, May 26, 1929, of practicing medicine illegally. According to reports, Goldenberg came to New York from Vienna five years ago and began to practice physical therapy. As the law requires that such practice shall be at least under the supervision of a licensed physician, Goldenberg seems to have obtained the help of Dr. Joseph P. Essner and, later, Dr. J. Marino. Goldenberg told a woman who went to his office that she was suffering from gallstones and is said to have offered her a preparation, which he guaranteed would cure her, at $2 a bottle. It was necessary for the patient to take twenty-four bottles. When the "medicine" was tested by the chemists of the health department, it was found to consist of 99.4 parts of water and no medicinal agents. Part of the evidence presented in the Goldenberg case was a series of contracts written in German, in which were promises to cure gallstones, diabetes and other ailments.

Who Is Practicing Abroad?—The eleventh edition of the American Medical Directory, which is now ready to ship, contains, for the first time, a list of American physicians who are located in foreign countries, including those engaged in research or graduate study, as well as medical missionaries and those employed by industries or otherwise temporarily absent. The list is on page 1689. The directory is published by the American Medical Association, 535 North Dearborn Street, Chicago.

OREGON

Personal.—Dr. Randall F. White, Portland, has been appointed medical director of the Russian Caucasus for the Near East Relief. He will have charge of a children's hospital at Leninakhan in southwest Russia, and of traveling clinics in adjacent provinces. He and his family sailed last month.

Dr. McCool Goes to California.—The University of California Medical School announces that Dr. Joseph L. McCool has accepted an appointment as associate clinical professor of ophthalmology, effective July 1. Dr. McCool, for more than twenty years has practiced in Philadelphia and Portland, and has taught at Temple University School of Medicine, University of Pennsylvania Post-Graduate School of Medicine and University of Oregon Medical School. He is a past president of the Pacific Coast Oto-Ophthalmological Society.

Hospital News.—Since the U. S. veterans' bureau hospital opened in Portland, the turn-over of patients has been about 350 a month, a rate which tests the capacity of the hospital. The new hospital is said to be equipped with every facility for the care of general medical and surgical cases and to have one building for the care of psychotic patients and another for tuberculous patients. The hospital is near the medical school of the University of Oregon, the county hospital and the children's hospital. It has had the hearty cooperation of local physicians.

PENNSYLVANIA

Philadelphia

Personal.—Dr. Temple S. Fay has been made head of the department of neurosurgery at the Jewish Hospital, Philadelphia.——Dr. G. R. Anderson has been elected president of the board of trustees of the Spangler Hospital.——Many of the delegates to the International Hospital Congress at Atlantic City from foreign countries were guests of the Philadelphia Hospital Association at a dinner, June 12. Dr. Joseph C. Doane, a past president of the American Hospital Association, was toastmaster.——Dr. P. Brooke Bland has been appointed visiting physician to the Preston Retreat for the ensuing year.

University News.—During the commencement exercises at the Woman's Medical College of Pennsylvania ground was broken for the first units of the $1,000,000 building on the new site at Henry Street and Abbottsford Road, Falls of Schuylkill. Eighteen women were graduated from the college June 12. The

alumni dinner was attended by sixty women physicians. Dr. Martha G. K. Schetky, president of the alumni association, presided.——At the annual meeting of the medical alumni of the University of Pennsylvania, June 15, Dr. Charles K. Mills, the oldest alumnus present, was presented with a cup, as were Drs. Henry W. Himmelberger, Reading, and Gordon T. Atkinson, Crisfield, Md., of the class of 1869. The class of '94 had the largest number of members present. Dr. Edwin S. Potter, '91, from Santa Barbara, Calif., was awarded the prize for coming the greatest distance. Addresses were made by Drs. George E. de Schweinitz, Alfred Stengel and Samuel M. Hamill. Dr. George M. Coates was elected president of the medical alumni for the next year.

Growth of Radiation Department.—The radiologic department of the Philadelphia General Hospital has since 1922 expanded until the entire first and fifth floors of the new building have been assigned to it. On the top floor eighty-eight ward beds are reserved for cancer patients; on the first floor are the clinic and the reception room; the radium treatment compartments, a workroom for making up radium applicators and packs, and roentgen-ray machines. Of more than 6,000 patients who had received radium or roentgen treatments, 39 per cent were still living, although many were admitted in a feeble state. The roentgen-ray department operates continuously from 9 to 5 o'clock, and special night nurses are on duty to adjust, remove or reapply radium packs. There are facilities at the hospital and personnel to care for any kind of cancerous lesion as well as other ailments in which radiation treatment is indicated. The department hopes that the medical profession will avail itself of this service and cooperate in giving these cases the advantage of early treatment. There are now among those that come an "appalling" number that are hopelessly inoperable.

TENNESSEE

Malaria Tests on Thousands of Children.—At a conference in Memphis, June 10, attended by Dr. Eugene L. Bishop, state health officer, Dr. William B. Harrison of the county board of health, Dr. Lloyd M. Graves of the city board of health, and Dr. L. L. Williams of the U. S. Public Health Service, it was announced that a malaria index would be carried out in Shelby County on about 20,000 school children as part of a state-wide drive against malaria. The object of the test would be to determine just how much malaria there is in Shelby County. Many physicians and nurses will assist in this work.

Survey of Thyroid Enlargements. — School children in forty localities in Tennessee have been surveyed by the U. S. Public Health Service to determine the prevalence of thyroid enlargement. Among 9,073 white and 1,739 colored boys, and 11,120 white and 3,196 colored girls there were found 4,876 thyroid enlargements, representing a percentage of 19.4. Thyroid enlargements, the public health service says, prevailed among the white boys to the extent of 9.5 per cent and among the white girls to the extent of 23.5 per cent. Among the colored boys, 84.6 per cent of the thyroids were normal and among the colored girls 64.5 per cent. All degrees of enlargement were noted. For example, among the white boys, 7.7 per cent were considered very slightly enlarged; 1.5 per cent as slightly enlarged, 0.2 per cent as adenomatous, and 0.04 as moderate enlargements. The finding that endemic goiter is more frequent among the colored children of Tennessee may be due to nutritional and economic factors. Endemic goiter is more prevalent in eastern than in western Tennessee. No relationship was found between the amount of goiter and the sources, treatment and ultimate safety of public water supplies. There was, however, a slightly larger incidence of endemic goiter among the users of chlorinated drinking water than among the users of unchlorinated water. In Oregon the incidence of endemic goiter is said to be slightly greater among the users of unchlorinated water. In surveys like this one made by the U. S. Public Health Service in six states and one city, the order of goiter incidence was as follows: Minnesota, Cincinnati (colored), Cincinnati (white); Oregon, Tennessee (colored); Tennessee (white), Massachusetts and Connecticut.

WEST VIRGINIA

Society News.—The Fayette County Medical Society, Montgomery, was addressed, June 11, by Dr. Thomas G. Reed, Elkridge, on "Traumatic Shock" and by Dr. William R. Laird, Jr., Montgomery, on "The Rupture of Gastric and Duodenal Ulcers."

Personal.—Dr. Guy Hinsdale, who recently moved to White Sulphur Springs, is a representative for the International Society of Medical Hydrology.——Dr. William H. McLain has been appointed health commissioner of the city of Wheeling for a term of four years.

WISCONSIN

Personal.—Dr. William W. Morrison has been elected health officer of the city of Edgerton.——Dr. Edward Blumer, having been recently reelected, is now serving his nineteenth year as village president of Monticello.

Society News. — The Canti Cancer Film was presented before a joint meeting of the Milwaukee County Radiological Society and the Milwaukee Academy of Medicine, June 11. An address was given by Dr. Stanley J. Seeger on "Sedimentation Reaction in Children."——The Eau Claire and Associated Counties Medical Society was addressed recently by Dr. William C. Carroll, St. Paul, on "Cervical Ribs." —— The Jefferson County Medical Society was addressed, in April, by Dr. Chester M. Kurtz, Madison, on "Determination of Cardiac Enlargement and Its Significance in Diagnosis."——The Marathon County Medical Society, Wausau, presented, May 1, three reels of motion pictures on "Diagnosis and Treatment of Syphilis and Gonorrhea." —— The Marinette-Florence County Medical Society gave a dinner in honor of Dr. and Mrs. Edward Sawbridge of Stephenson, Mich., whom they presented with a silver service. —— Dr. Lyman A. Copps, Marshfield, addressed the annual meeting of the Ninth Councilor District Medical Society, Stevens Point, on "Effects of Increased Intracranial Pressure"; Dr. Carl W. Eberbach, Milwaukee, on "Medical Experiences Among the Labrador Eskimos," and Dr. Joseph F. Smith, Wausau, on "Intestinal Obstruction."

GENERAL

Bath Tubs Less Popular Than Cars.—A survey made by the General Federation of Women's Clubs in 1925 indicated that only 68 per cent of city homes were equipped with stationary bath tubs. According to the Illinois state health department, from 1913 to 1922, enameled bath tubs were installed at the rate of 480,000 a year in the United States. This figure increased to an average of 1,100,000 a year from 1922 to 1928. Bath tubs still appear to be less in public favor than automobiles.

Deaths by Violence Increase. — The National Safety Council, with headquarters in Chicago, has published the results of the annual survey showing that 96,000 persons met accidental death during 1928 in the United States, an increase of 3.1 per cent over the previous year. The council reports that 27,500 persons were killed in automobile accidents, or 6.3 per cent more than in the preceding year. Railroad and street car accidents decreased. Aviation is said to have taken 368 lives, among whom those of passengers exceeded those of pilots. There were said to be 24,000 accidents in American homes. The home tragedies, as the result of fires and explosions, numbered 6,000; those due to asphyxiation and suffocation, 4,000; those due to poisoning, 2,000, and the remainder, or about 40 per cent, were due to such accidents as falls on slippery floors and rugs.

Health Officers of North America. — The forty-fourth annual meeting of State and Provincial Health Authorities of North America, Washington, D. C., June 1, was addressed, among others, by Dr. Aquilino Villanueva, chief health officer of Mexico. Dr. Frederick E. Trotter, health officer of the Territory of Hawaii, was elected president for the ensuing year, and Dr. Eugene L. Bishop, health officer of Tennessee, vice president; Dr. A. J. Chesley, St. Paul, executive officer of the Minnesota State Board of Health, continues as secretary. The organization adopted a resolution urging passage of the Capper-Bankhead bill to provide for the development of an organization throughout the country for rural sanitation. The organization also went on record as favoring the passage of the Jones-Cooper bill to continue in operation the division of maternal and child health in the U. S. Department of Labor.

Disbursements by Rosenwald Foundation. — The latest gifts announced by the Julius Rosenwald Foundation, Chicago, amounting to $205,000, are to aid hospitals in the south and east to maintain negro public health nurses in fourteen southern states, and for a negro health survey. The hospitals awarded funds on condition that the community raise funds also are the Charity Hospital, Savannah, Ga., $50,000 toward a new building; St. Agnes' Hospital, Raleigh, N. C., $15,000 toward a nurses' home and outpatient service; Richardson Memorial Hospital, Greensboro, N. C., $15,000 toward a nurses' home; Mercy Hospital, Philadelphia, $35,000 and Provident Hospital, Baltimore, $60,000. The foundation appropriated $30,000 for a negro health survey to be made by the Tennessee State Health Department cooperating with the U. S. Public Health Service and Fisk University.

Carnegie Institution's Silver Anniversary.—The twenty-fifth anniversary of the beginning of active research by the Carnegie Institution of Washington was celebrated at Cold Spring Harbor, Long Island, May 31. Exhibitions were arranged to show what had been accomplished by the department of genetics, and members of the board of trustees and the president presented addresses. The public was invited to the exhibitions, June 1-2. Further celebration will take place in August in San Francisco, arranged by the department of terrestial magnetism of the Carnegie Institution. This will relate closely to the activities of the nonmagnetic ship *Carnegie*, which, although out on a three-year cruise, will be in San Francisco then. The celebration will be held aboard the ship. The initial work of the department of terrestial magnetism at sea was done in the Pacific Ocean by the brigantine *Galilee*, which was outfitted in San Francisco. (THE JOURNAL, July 14, 1928, p. 106.)

Medical Bills in Congress.—S. 1538, introduced by Senator Brookhart, Iowa, proposes to amend the World War Veterans' Act to provide compensation for disability or death of a World War veteran, even though the disability or death be not of service origin. H. Res. 57, introduced by Representative Black, New York, proposes that the House of Representatives request the President to call an international conference to limit the production, manufacture, sale, and distribution of narcotic drugs to the legitimate medical and scientific requirements of the world. H. R. 4124, introduced by Representative McSwain, South Carolina, proposes to authorize the Arlington Cemetery Commission to set apart a suitable plot of ground in Arlington National Cemetery for the burial of the bodies of the heroes of the fight against yellow fever and to erect an imposing monument to the memory of the entire group. H. R. 4130, introduced by Representative Bland, Virginia, proposes to authorize an appropriation of $630,000 for the construction of additional hospital facilities and physicians' quarters at the Southern Branch of the National Home for Disabled Volunteer Soldiers at Hampton, Va.

Honorary Degrees.—The following honorary degrees were awarded by the colleges indicated at the recent commencements:

Arthur H. Compton, Ph.D., professor of physics, University of Chicago, D.Sc., Yale.
William H. Park, M.D., professor of bacteriology and hygiene, New York University and Bellevue Medical College, D.Sc., Yale.
William J. Mayo, M.D., Rochester, Minn., D.Sc., Northwestern University.
William H. Carmalt, M.D., emeritus professor of principles and practice of surgery, Yale University School of Medicine, D.Sc., Yale.
Robert A. Millikan, Ph.D., Norman Bridge Laboratory of Physics, California Institute of Technology, LL.D., New York University.
William H. Wilmer, M.D., director, Wilmer Ophthalmological Institute, Johns Hopkins University, Baltimore, D.Sc., New York University.
William T. Bovie, Ph.D., professor of biophysics, Northwestern University Medical School, Chicago, D.Sc., Albion College.
Chester H. Sample, M.D., Saginaw, Mich., LL.D., University of Detroit.
Thomas F. Abercrombie, M.D., state health commissioner of Georgia, D.P.H., University of Georgia.
Frank Vinsonhaler, M.D., dean, University of Arkansas School of Medicine, LL.D., University of Arkansas.
James A. Harten, M.D., New Haven, Conn., M.Sc., University of Pennsylvania.
John F. Barnhill, M.D., Indianapolis, past president of the American Laryngological, Rhinological and Otological Society, LL.D., Indiana University.
Lafayette Page, M.D., Indianapolis, professor of otology, laryngology and rhinology, Indiana University School of Medicine, LL.D., Indiana University.
William N. Wishard, M.D., Indianapolis, professor of genito-urinary surgery, Indiana University School of Medicine, B.Sc., DePauw University.

Society News.—The International Society for Crippled Children has arranged a conference of physicians, public officials and social workers at Geneva, Switzerland, July 28-August 2. The subjects for discussion include finding crippled children, examination, diagnosis and hospitalization, relations of practitioners, education of the crippled child, and the prevention of causes of crippling conditions. Mr. Edgar F. Allen, Elyria, Ohio, president of the society, will open the conference with an address on "Evolution of the Problem of the Crippled Child."——Delta Omega, public health fraternity, recently elected to honorary membership Surg. Gen. Hugh S. Cumming, U. S. Public Health Service; Dr. Frederick F. Russell of the Rockefeller Foundation and President Hoover. Dr. Charles V. Chapin, for many years health officer of Providence, R. I., is the only other horonary member of the society.——The American Association of Medical Milk Commissions and the Certified Milk Producers' Association of America held a joint meeting, June 24-25, at Montreal. Karl F. Meyer, Ph.D., professor of bacteriology and director of the Hooper Foundation, University of California Medical School, spoke on "Undulant Fever in the Light of Recent Observations"; W. H. Diffenbach, "Milk Production and Facts in Regard to a New Test for the Detection of Tuberculosis," and Prof. William D. Frost of the University of Wisconsin, Madison, "Examination of Cows and Employees for Streptococcus Epidemicus Carriers."——Dr. René Sand, Paris, was elected president of the first International Hospital Congress, which met in Atlantic City, June 14, and E. H. Lewinski-Corwin, Ph.D., secretary-general.

A Mine of Official Information.—The new edition of the American Medical Directory, which has just been published by the American Medical Association, contains in one volume a huge amount of information arranged in convenient form. One feature is an abstract of the laws which govern medical practice in each state, the names of members of licensing boards and state boards of health, the names of city and county health officers, the officers of state and county medical societies, and of those physicians who are in the government services. On page 49 are the names of pathologists who are conducting clinical laboratories which have been approved by the Council on Medical Education and Hospitals of the American Medical Association. The directory is composed largely, however, of authentic data about more than 168,000 physicians in the United States, its possessions, and Canada.

CANADA

Annual Medical Meeting and Election.—The Canadian Medical Association held its annual meeting at Montreal, from June 17 to 21. The program included guest speakers, clinics, business sessions, meetings of allied associations, and entertainment including a golf tournament on the Dixie links, the winner of which was awarded the "Ontario cup." Among the guests were Prof. G. B. Roatta, Florence, Italy, who spoke on "Child Welfare, the Basis of Public Health"; Sir St. Clair Thomson, London, England, "Intrinsic Cancer of the Larynx: Lasting Cure in 80 Per Cent of Cases by Laryngofissure"; Prof. E. Rist, Paris, "Sudden Onset of Pulmonary Tuberculosis and Its Lobar Localizations"; Dr. F. J. H. Campbell, London, "Mental Changes in Physical Disease"; Dr. Charles F. McKhann, Jr., Boston, "Early Diagnosis of Poliomyelitis" with moving pictures; Drs. James A. Doull, Baltimore, "Progress in Studies in Acute Respiratory Diseases"; P. F. Armand-DeLille, Paris, "Diagnosis of Early Stages of Pulmonary Tuberculosis in Infancy and Childhood"; L. Ambard, Strasbourg, France, "Significance of Hyperglycemia in Diabetes," and J. A. Cairns-Forsyth, London, England, "Surgery of the Biliary Tract and Pancreas." The Canadian Public Health Association, the Women's Medical Association, the French-Speaking Physicians' Association, and the Canadian Social Hygiene Council met simultaneously. The officers elected by the council of the medical association at this meeting were Drs. Alfred T. Bazin, Montreal, president; William Harvey Smith, Winnipeg, president-elect; Thomas C. Routley, Toronto, general secretary, reelected, and Frank S. Patch, Montreal, honorary treasurer. The annual banquet was attended by a distinguished company, but there were no speeches. The council passed a resolution regretting the resignation of Dr. Alexander D. Blackader as editor of the association's journal after ten years of service.

Osler's Remains Rest Among His Books.—The library which Sir William Osler bequeathed to McGill University, Montreal, was dedicated May 29. In the large audience were the sister of Lady Osler, Mrs. H. B. Chapin, Boston; the nephew of Sir William, Mr. H. S. Osler; the prime minister of Canada, and other distinguished persons. Dr. William Sydney Thayer, Baltimore, President of the American Medical Association, long a colleague and close friend, delivered an eloquent and beautiful appreciation of Osler as a man, as a physician and as a writer. Leonard L. Mackall in the New York *Herald Tribune* writes that the books were not sent to Montreal until "Bibliotheca Osleriana" had been completed. It was Osler's request that the catalogue which had been in preparation since before his death in 1919, in case of death, be completed by Lady Osler and his friends, Dr. W. W. Francis, who had lived in Osler's home for years; Dr. Thomas A. Malloch, librarian of the New York Academy of Medicine; Mr. H. H. Hill, and Mr. Mackall. With the exception of Lady Osler, who died last year, they were present at the dedication in Montreal. Osler, as a young physician, spent more time and money than he could afford to collect scientific journals. In 1884 he was called to Philadelphia, where he continued to collect journals. Many of his rare books were acquired while in Baltimore. He was so

fond of old scientific books as to spend his holidays browsing through the book shops in England, endeavoring especially to obtain fundamental contributions. He acquired many books published in the fifteenth century. The library which Osler gave to McGill University contains 7,600 volumes selected with a view to their value in the study of history of medicine and science. These were by no means all of the books which filled his house at Oxford. He left to Johns Hopkins Hospital a collection of works on the heart and lungs, and gave to the Tudor and Stuart Club of Johns Hopkins University, which he and Lady Osler founded in memory of their son, another collection. McGill University has provided a room for Osler's books, arranging them on shelves as nearly as possible in the catalogue order. His own writings are arranged at the end of the room in the alcove on one side and on the other are those of his favorite authors. Behind a panel bearing his portrait, as he desired, rest his remains. Four portraits hang in the room, one of Osler made in 1885 shortly after he left McGill; the others are of Harvey, of Sydenham and of Linacre, the translator of Galen.

PHILIPPINE ISLANDS

Newspapers Play Up a "Discovery."—In some manner, the newspapers in Manila obtained and published an item, recently, announcing that two local physicians had discovered a cure for typhoid. The editor of the *Journal of the Philippine Islands Medical Association* says that the press not only played up the item but lauded it editorially, creating no little commotion. The wisdom of such an announcement is not clear, in view of the fact that the "discoverers" in this case refused to give out the formula. The Manila show is over, and a remedy has been suggested for future impresarios of this sort. The Filipino law provides that any certificate of registration may be revoked on unprofessional conduct which involves advertising by any person, firm, association or corporation in a written or printed paper in which untruthful or improbable promises are made. Medical ethics is as necessary in Manila as it is in Chicago or elsewhere.

FOREIGN

Physicians in Parliament.—As a result of the recent general election in Great Britain, there are now eighteen registered medical practitioners in the new House of Commons as against thirteen in the old. Two physicians—Lord Dawson and Lord Moynihan—are members of the House of Lords. The new minister of health is Mr. Arthur Greenwood, and his parliamentary secretary, Miss Susan Lawrence. Mr. Greenwood has had experience in the ministry, having been parliamentary secretary in 1924.

American Public Gives Hospital to Japanese.—The Fraternity Hospital at Tokyo, one of the best in Japan, was opened, June 1, on the site in a populous section, where thousands of people perished in the earthquake of 1923. The $1,500,000 building is a modern American steel and concrete structure, accommodating 248 patients, with an outpatient department accommodating 600. The entire cost of construction and the $2,000,000 reserve fund which it has are the last remnant of the great outpouring of sympathy which the American people gave at the time of the disaster and forwarded to Japan as the American Relief Fund. Prince Tokugawa at the opening ceremony said that the hospital will serve not only the sick but as an "eternal memorial to the friendship of Japan and America and as an everlasting symbol of human brotherhood."

British Medical Prizes.—The British Medical Association announces that it will consider the award of the Katherine Bishop Harman Prize in 1930 (about $400), which is intended to encourage study directed to the diminution of risks that are apt to rise in pregnancy and childbearing. Any practitioner in the British empire is eligible to compete. The Sir Charles Hastings Prize, which is open for award in 1930, was established to promote observation, research and record in general practice. Its money value is 50 guineas. The association will award in March, 1930, prizes of about $125 for the best essays on "Three Cases Illustrative of the Value of Antenatal Observation of Pregnant Women" by final year medical students or by registered practitioners of not more than one year's standing. The association is prepared to receive applications for the Ernest Hart Memorial Scholarship of $1,000 per annum and three research scholarships each of about $750 per annum. These will be given to candidates whom the science committee of the association recommends as qualified to undertake research in any subject (including state medicine) relating to the cause, prevention and treatment of disease. The address of the British Medical Association is Tavistock Square, London, W. C. 1.

American Hospital in Constantinople Needs Funds.—Philanthropic Americans averted the closing of the American Hospital of Constantinople, recently, by donating about $16,000 to meet expenses. The hospital was forced to move and to renovate another building, the lease on the old building having expired. It still needs financial assistance. Established in 1920, chiefly to provide care for Americans, it has had assistance from the American Red Cross, Near East Relief and American business men. The American colony in Constantinople at times numbers several hundred. The hospital served a special need during the turbulent situation following the Great War, in caring for many refugees. An important part of its work has been the training of nurses, eleven graduating in March, 1928, and six in January, 1929. American standards have been maintained in training nurses, although they are mostly Russians, Belgians and Armenians. An arrangement has been made with American Women's Hospitals, New York, whereby it will support six beds for children in the American Hospital of Constantinople. Two great needs of the hospital are a building of its own, and some organization in America which would assume the task of supplying funds to meet the annual deficit. The medical director is Dr. Lorrin A. Shepard, a graduate of Columbia University College of Physicians and Surgeons, New York. A board of American business men and others attends closely to the administration (THE JOURNAL, April 21, 1928, p. 1302).

Government Services

Examination for Entrance to Public Health Service

Surgeon General Cumming announces that an examination will be held, September 9, at Washington, D. C., Chicago, New Orleans and San Francisco, for entrance into the regular corps of the U. S. Public Health Service. Requests for permission to take the examination should be addressed to the surgeon general, U. S. Public Health Service, Washington, D. C. Candidates must be 23 and not over 32 years of age, graduates of a reputable medical college, and must have had one year's hospital experience or two years' professional practice. The examination will consist of oral, written and clinical tests before a board of officers, and a physical examination. Those who pass will be recommended for appointment by the President with the advice and consent of the Senate.

Army Personals

Col. Robert M. Blanchard is detailed as an instructor of the Georgia National Guard with station at Atlanta on completion of his present tour of foreign service.——Capt. Charles C. Gans, Fort McPherson, Georgia, will proceed to his home about July 15 and await retirement at the convenience of the government.——Major Jacob C. Bowman will sail from San Francisco about October 5 for New York, proceeding from there to Fort Monroe, Va., for duty, and on his arrival Capt. Everard Blackshear will stand relieved from duty and proceed to Fort Moultrie, South Carolina.——Major Daniel R. Chase will sail from New York about October 14 for San Francisco and then proceed to Fort Huachuca, Arizona.——Capt. Walter F. Tolson was to proceed from the general depot, Brooklyn, about July 5 for the Walter Reed General Hospital for duty.——Capt. Hubert S. Steenberg has been retired from active duty, having been found incapacitated on account of disability incident to service.

Navy Personals

Lieut. Cyrus C. Brown has been transferred from Guam to San Diego, Calif., Lieut. Comdr. Wilbur O. Manning from Haiti to Philadelphia, and Lieut. Charles G. McCormack from the Virgin Islands to Hampton Roads, Va. Lieut. Lester E. McDonald has been transferred from Mare Island, California, to a destroyer squadron of the battle fleet, and Lieut. Edward M. Steger from the fleet to San Diego, Calif. Lieut. Oscar W. Thoeny has resigned from the navy, effective July 16. Comdr. Harry R. Hermesch has been transferred from the navy yard, Washington, D. C., to the U. S. S. *Tennessee*, and Lieut. Charles Wheatley to the bureau of medicine and surgery. Lieut. William M. Cason resigned from the navy, effective July 1. Lieut. Bernard S. Pupek has been transferred from San Francisco to the navy hospital, Boston, and Lieut. William C. Baty, Jr., to the navy hospital, Washington, D. C.

Foreign Letters

LONDON

(From Our Regular Correspondent)

June 8, 1929.

War Pensions

The largest single vote for any of the great departments in the house of commons was $268,000,000 for the ministry of pensions. The number of beneficiaries is about 1,500,000. At the end of the current year no less than $4,565,000,000 will have been spent on war pensions, compared with a little more than half that sum by Germany and less than half by France. The reason for the difference is that the rates in this country are much higher. A 50 per cent disabled man get $5 a week, as compared with $115 a year in France and $90 in Germany. This year's estimate shows a decrease of nearly $17,500,000, but for the next ten years the mean expediture will be about $180,000,000. The item that has contributed most to the decline this year is the reduction in the number of children to whom allowances were given. The demand for medical treatment is declining and the hospital accommodations of the ministry are reduced accordingly. The ministry still retains seventeen hospitals with about 3,000 beds and has a call on other hospitals with accommodations for 2,000 cases. The number of patients in the hospitals is 5,106.

The Spread of the Smoke of Towns into the Country

Prof. J. B. Cohen, addressing members of the Leeds Luncheon Club, said that a phenomenon he had noticed recently proved definitely that smoke from industrial centers spread for many miles into the country. A rain cloud would absorb soot and smoke and almost become saturated with it, just as fog would absorb it. When that rain cloud, saturated with soot and tar, fell as rain the soot was liberated and came down with the rain. On the previous day, near Coniston, it was drizzling all day, and he noticed that the surface of the lake became coated with a thin film of greasy matter. It was significant that the wind was blowing direct from Yorkshire. As the wind blew the film toward him, the water near the shore became coated with a black fringe of soot. He took out a piece of rag and placed it on the surface of the water. In evidence, Professor Cohen held up a piece of rag, which was black all over with thick, greasy soot. That, he said, came from Yorkshire. Since the war a good deal had been done in the factory, and the boiler chimney producing smoke would one day be obsolete; but 40,000,000 tons of coal was burned annually in domestic fireplaces. Six per cent at least went up the chimney as soot. That was to say, 2,400,000 tons of soot fell over the land, and of that quantity a fourth was tar. The increasing discoloration of trees and shrubs was due not to factories but to domestic soot.

Compulsory Health

Dr. William G. Savage, health officer for Somerset, in an article issued under the auspices of the Central Council for Health Education, advocates the adoption of "compulsory health." By that he means the duty of all individuals in the community to maintain themselves in health or, if they are in charge of children, to see that they are maintained in health, all, of course, so far as is practicable—a duty if necessary to be enforced by compulsion. In the old days when one did not care what happened to one's neighbor, such an idea would have seemed absurd; but in many ways people are advancing steadily toward an acceptation of it. It is logical to demand that members of the community shall not deliberately live under unhealthful conditions that will predispose them to develop tuberculosis, and, if infection is also added, largely insure their acquiring it. Those penalized by such neglect include a far wider range than the sufferer himself and involve expenditure for the community which need not have been incurred. If it is right for the community to expend large sums of money on maintaining and assisting its members to maintain or to regain health, it is but a logical sequence that its members must themselves play their part in maintaining their own health. Any neglect on their part is antisocial and will in time be recognized as such. Before, however, any such demand can be made on members of the community they should have the opportunity of knowing much more about the laws of health and how health can be maintained. There is urgent need for an extensive system of general instruction on health matters, and Savage believes that in a few years this will be recognized as an essential part of the work of every health department.

Traffic Noises and Dangers

The nuisance of traffic noises and their possibly injurious effect have been described in previous letters. The report to the minister of transport of a conference on traffic noises and priority of traffic at crossroads has been issued. It recommends that a regulation should be made to deal with excessive and avoidable noise from automobiles that are badly constructed, badly loaded or in faulty condition. Some preliminary inquiries were made as to the types of horns in use and the practicability of framing a definition that would distinguish those which have a low and pleasing note from those which have a strident and irritating one. It was found that the classification of horns into wind-blown (either hand or fan), electric-motor driven, and electric buzzer, did not afford a basis for a regulation, as it is possible to make horns of any of these groups with either objectionable or melodious notes. The conclusion was that the only solution would be to permit specific types, e. g., bulb horns or other types that have been proved satisfactory by some test. The conference held that the complaints against excessive and nerve-racking noises from motor horns constitute a legitimate grievance and that the causes fall under two heads: (1) unduly strident notes and (2) unnecessary and excessive using, particularly at night, during sleeping hours. As to the first, a more powerful horn may be reasonable on the open road in rural areas where high speeds may be justifiable, certainly in the daytime, though at night the warning of the headlights should reduce the necessity to a minimum. The second point is more difficult. The conference explored the possibility of instituting zones of silence, where motor horns should not be permitted to sound at all or, alternatively, should be sounded only when there is some vehicle, pedesterian or animal in sight which necessitates use for the sake of safety. This suggestion was uncompromisingly opposed by the motor organizations on the ground that nothing should be done to interfere with the discretion of the driver. In the case of an accident, the first question asked by the police is "did the driver sound his horn?" An answer in the negative is usually regarded as indicating responsibility for the accident. The conference recommended that the matter should be further investigated in consultation with the National Physical Laboratory, other scientific bodies, and motoring organizations and manufacturers, so as to fix a practical standard. Another suggestion was that streets should bear adequate name plates, so that congestion due to drivers uncertain of their whereabouts slowing down and stopping in an effort to find out the name of the streets should be avoided.

The problem of reducing the collisions at crossroads proved difficult. The law does not lay down any rule for motorists approaching crossroads and other junctions aside from the general prohibition against dangerous driving. According to custom, motorists on an important road have the prior right of way and rely on the traffic from minor roads giving way to them. The Automobile Association has for some years advocated the following courtesy rule, known as the offside rule, whereby motorists are enjoined to look out for and give way to traffic approaching from the right. But the conference did

not approve of this rule. It thought that the best course would be that at road junctions traffic proceeding along a road of lesser importance should look out for and give way to that on roads of greater importance. The corollary is that signs should be placed at suitable points on the lesser roads warning motorists that they are approaching a road junction. The signs might take the form of an appropriate symbol with the words "Dead Slow" picked out with reflectors. In addition, there should be a white line across the road. The layout at road junctions was also considered. It was held that this should be different at a crossing of two roads of equal importance from that of the crossing of a major by a minor road. A complete roundabout was recommended for the first and a partial one for the second.

The Centenary of Thomas Young

This year is the centenary of the death of Thomas Young, one of the greatest physicists, who was also a physician. Of all the distinguished men whom the Quakers have contributed to science and to medicine, out of all proportion to the numbers of that sect, he was the most eminent. From his earliest years he showed extraordinary ability. At the age of 2 years he could read with fluency. He was only 20 when he wrote his celebrated treatise on the Mechanism of the Eye, which was read before the Royal Society, of which he was made a fellow in the following year. This paper dealt with accommodation of the eye. Later he gave the first description of astigmatism and formulated the three-color theory of color vision. He actually proved the existence of lenticular astigmatism in his own person. In physics his work on the interference of light renders him the main founder of the wave theory, which ousted the corpuscular theory for a century. He introduced the term "energy" into physics. He made important contributions to the theory of the tides. He was professor of natural philosophy at the Royal Institution, a position which he resigned in 1803 to devote himself to medical practice, in which he was not a conspicuous success. However, he wrote a book entitled "Practical Nosology and Pharmacology," which was published in 1813. It is learned and still worth reading. His extraordinary versatility was further shown by linguistic talents, which he turned to account in translating the demotic text of the Rosetta stone before the Frenchman Champollion accomplished his great work on the subject. The inscription on the tablet to his memory in Westminister Abbey describes him as a "man alike eminent in almost every department of human learning."

High Death Rate from Cold Spell

The return of the registrar-general for England and Wales for the first quarter of this year shows that the deaths numbered 204,293, which is 88,654 more than in the preceding quarter and 67,978 more than in the corresponding quarter of 1928. The death rate was 21.0 per thousand of the estimated population, 7.1 above that recorded during the first quarter of last year; with the exception of the March quarter of 1919, when, owing to the influenza epidemic the rate was 21.3, it was the highest rate recorded in any first quarter of the present century. It was due in a large measure to influenza and also to the high mortality from respiratory and circulatory diseases occurring during the spell of arctic weather in February. Influenza was either an immediate or contributory cause of death in 23,763 cases, or 11.63 per cent of the total deaths, whereas in the previous epidemic in the March quarter of 1927 the figures were 17,931 and 10.62, respectively. The mortality of infants under 1 year was 111 per thousand registered live births, 14 above the average of the ten preceding first quarters, and the highest in any quarter since the first quarter of 1919. The live births numbered 160,181, 4,512 more than in the preceding quarter but 7,745 below the number recorded in the corresponding quarter of 1928. They correspond to an annual rate of 16.5 per thousand.

DECREASE OF POPULATION

The natural decrease of population by excess of deaths over births was 44,112, against a natural increase of 43,386 in the corresponding quarter of 1926, a decrease of 1,786 in 1927 and an increase of 31,611 in 1928. This must not be taken to mean that this country has reached the stage of declining population, though, in consequence of the declining birth rate, the stationary stage seems in sight; but the birth rate and death rates have now so approximated that an unusually high death rate falls below the birth rate.

PARIS

(From Our Regular Correspondent)

May 29, 1929.

New Researches on Alveolodental Pyorrhea

Dr. René Vincent has recently given a rather new explanation of alveolodental pyorrhea, and the therapeutic results to which it has given rise seem to justify a certain measure of recognition. He states that, in the gums, particularly in the region of the interdental "bridges," there is a kind of lymphoid tissue similar to that of the tonsils and the appendix. This tissue, he explains, serves as a sort of excretory organ of micro-organisms. The micro-organisms thus eliminated come from distant foci of infection, often located in the intestine. Having been carried to the region of the gums, they set up an inflammation, and this causes the localized necrosis of the maxillary bone and the fetid suppurations that are characteristic of pyorrhea. As a practical deduction of this mode of thinking, Vincent recommends ascertaining, in the blood taken from the region of the gums, what micro-organism is responsible for the disturbance and the preparation therefrom of an autovaccine. The use of such vaccine effects an arrest of the evolution of the pyorrhea and checks the primary causal infection.

Treatment of Erythremia

Erythremia, or Vaquez's disease, marked by an undue increase in the number of erythrocytes in the blood, has always been regarded as a grave disease combated with difficulty. MM. Vaquez and Mouquin have communicated to the Academy of Medicine three clearly characterized cases with remarkable results following use of phenylhydrazine hydrochloride. This substance, administered by mouth, with an initial dose of 0.001 Gm., which is gradually increased to 0.0015 and 0.0025 Gm., effects a rapid diminution of the number of red corpuscles, which, in a few days, drop down to the normal figure, while the number of leukocytes increases rapidly. This result having been secured (on an average, within two weeks), the treatment is followed only intermittently, afterward. In one of the cases cited, a cure has been maintained for a year. No untoward effects or incidents have been observed, other than a slight subicteric state. Nevertheless, M. Vaquez advises caution in the use of the drug.

An Eminent Preacher's Public Address on the Subject of Tuberculosis

The Reverend Father Sanson is at present one of the most eminent preachers in France. A priest of the Order of the Oratory, he has delivered, from the famous pulpit of the cathedral of Notre-Dame de Paris, the special Lenten sermons for a number of years, and, with such success, that crowds of people gathered at the church, several hours before the portals were opened, and struggled to gain entrance. His eloquence is of a high order, and the clearness of his delivery is very impressive. All his sermons are transmitted by radio. He recently lent his support to a work of a social nature: the creation of a sanatorium for the tuberculous, to be located at Mégêve in Savoy. The meeting was held in an immense velodrome, used commonly for bicycle races and capable of seating more than 20,000 persons. High prices were charged for the seats, but they were all filled. He delivered a magnificent address, which

was transmitted by loud speakers to the most distant parts of the vast arena. The audience was astounded by the way he had been able to assimilate the medical conception and language needed to describe the march of tuberculosis and the evolution of the tubercle bacillus. He closed his address with a pressing appeal for the vaccination of the new-born with the B C G vaccine, and it was generally admitted that his forceful utterances would have done credit to a member of the Academy of Medicine. A considerable sum was realized for the purpose cited.

The Hygienic Aspects of Swimming Pools

M. Dujarric de la Rivère has called attention in vigorous language to the insanitary conditions he has found in the municipal swimming pools of Paris, as shown by the number of cases of conjunctivitis that develop among the bathers. He has proposed to the Academy of Medicine a series of measures calculated to assure the constant cleanliness of the water in the pools. The bathers should not be admitted to the pools until they have washed their feet in a small pool containing warm water in constant circulation. A permanent filter should be installed that would purify the water of the pools two or three times a day. The water on coming from the filters should be disinfected by means of sodium hypochlorite.

A Court of Justice and Alleged Divine Intervention

A peculiar case was brought recently before the Tribunal de la Seine. A woman who was preparing to take an examination to secure a position as a dental assistant accepted, for more than a year, private instruction from a teacher. She passed her tests successfully, but when her teacher demanded, as compensation for the instruction given, the sum of 2,400 francs ($96), as had been agreed on between them, she refused to pay it. According to her statement, she had never been able to understand anything her teacher had tried to impart, and, the evening before her examination, being certain that she would fail, she had made a pilgrimage to Lisieux—to the sanctuary of Saint Theresa—and had fervently prayed that she might help her. Consequently, she was convinced that it was to the saint and not to her teacher that she owed her success. The court seized with doubt and desiring possibly to accept, in part, the theory of a salutary autosuggestion, although declaring that the question of divine intervention had not been provided for in the laws, decided that the woman must pay her teacher but reduced the amount of the charge one half.

Blood Transfusion Directly into the Heart

Dr. Tzanck, physician to the hospitals of Paris, made a desperate effort to save a patient in a state of acute anemia due to severe hemorrhages following abortion. Venous injection was impossible, owing to collapse of the veins, and the patient was dying. At this juncture, Dr. Tzanck did not hesitate to make, with a long, slender cannula, a puncture in the fifth intercostal space, even with the sternum, and to inject 650 Gm. of blood directly into the heart. With the first 300 cc., the heart began to beat normally, and the patient made a most startling recovery.

In Aid of Convalescent Heart Patients

A society has recently been founded in Paris with the avowed object of aiding poor patients suffering from heart lesions, who have been dismissed from the hospital. It will be known as the Fondation Dike, in memory of the benefactress who first proposed the creation of such a society. Dr. Vaquez, the French cardiologist, is the moving spirit, and the seat of the association will be the offices of the Hôpital de la Pitié. The purpose of the society, with respect to young subjects affected with organic disease of the heart, is to aid them in finding work in keeping with their physical capacities, to watch over them during their apprenticeship, and to guide them in securing permanent positions. With regard to older subjects, the society plans to aid their families during the period of hospitalization, and to find for them employment that is not too fatiguing. These patients will be provided with a health record book, so that physicians who treat them, later on, may be acquainted with their personal histories and with the treatment that they have received. As the result of the care that will be given them, they will have the moral satisfaction of knowing that their families are not suffering from want, and they will be encouraged by the thought that they will not, by reason of their lesions, be condemned to a precarious and miserable existence. The minister of the interior, M. Tardieu, who presided at the meeting for the purpose of organizing, stated in his address, and with good reason, that the general public is under obligations to certain cardiac patients, such as automobile drivers, truck drivers, railway engineers and aviation pilots, who have been prohibited from continuing the practice of their trade or calling, in order to protect the public from grave accidents that they might cause if a syncope should suddenly overtake them while on duty, as has occurred in numerous instances.

Death of Dr. Louis Guinon

Dr. Louis Guinon has died at Paris, at the age of 69. Having specialized in pediatrics, he became the chief physician of two children's hospitals (Trousseau and Bretonneau). He is the author of numerous articles published in the *Archives de médecine des enfants* and *Le Nourrisson*. He was the founder of the Société de pédiatrie and of the Société des amis des hôpitaux des enfants. He created many dispensaries for infants, and, at the close of the war, was entrusted by the Comité américain de l'Argonne with the organization and directorship of the Centre de Mandres.

MADRID

(From Our Regular Correspondent)

May 16, 1929.

Mortality from Tuberculosis in Spain

Dr. Palanca, health inspector of the province of Madrid, recently delivered an address before the Real Academia Nacional de Medicina on "Mortality from Tuberculosis in Spain." He mentioned the present enthusiasm for the creation of sanatoriums in Spain. There are eight in the province of Madrid alone. A small town in the mountains has been wholly transformed into a tuberculosis colony and at present at Hoyo de Manzanares and in El Escorial two more sanatoriums are under construction. The speaker commented on the statistics of morbidity and mortality from tuberculosis, which he thinks have been exaggerated. Dr. Codina admitted 50,000 deaths from tuberculosis yearly in Spain and calculated a morbidity of 500,000. The official statistics show a mortality from tuberculosis of 26,517 during 1928; as it was 29,991 during 1920, there is a decrease in the mortality. The provinces which show the higher mortality from tuberculosis are Sevilla, La Coruña, Huelva, Madrid and Pentevedra, while those which show the lower mortality are Teruel, Segovia, Cuenca and Guadalajara. The maximal mortality of 197 deaths from tuberculosis per thousand patients occurred in Sevilla ,and the minimal mortality of 57 deaths per thousand in Teruel. The speaker excluded the climate as a factor in the mortality from tuberculosis. He considered as important factors the increase in population and industries. He did not regard the high prices of food as a big problem, and asserted that the market in Madrid is one of the most economical in Spain. He concluded that in the prophylaxis of tuberculosis all the efforts of the state, provinces and cities should be united. The work should be provided for by legislation, the selling of milk should be regulated, a campaign for improved hygiene should be made, and a school of phthisiology should be opened. There is a greater need for healthful

and inexpensive lodgings with plenty of sun and light, where tuberculosis may be prevented, than for the construction of sanatoriums.

Delivery of Five Fetuses

Prof. Isidoro de la Villa recently lectured on a case of multiple delivery, which he observed in his clinic at the Faculty of Medicine of Valladolid. He mentioned that anthropoid female monkeys have two or three offspring at one time but that in the human being the function has been established in such a way that the woman has only a monthly ovulation and becomes pregnant regularly with only one child. In the case reported, a woman, aged 32, had had four normal children at different deliveries, then two abortions of twins, and finally the reported pregnancy. Labor started at the sixth month of pregnancy. The first fetus born was a male, in vertex presentation. In the evening of the same day the patient's temperature rose to 38.5 C. (99.3 F.) and she was admitted to the hospital of Valladolid. She developed a serious infection and on the next day her temperature reached 40 C. (104 F.). Dr. Muñiz, an assistant professor on the faculty of medicine, punctured the second bag of waters, and a second male fetus was born in breech presentation. Then, with no intervention, and at intervals of approximately half an hour, two other female fetuses were born, one of them in vertex presentation and the other in breech presentation. All the fetuses were born alive. Three hours later, the placenta and membranes were delivered. Two and a half hours later, the last female fetus was born, enclosed in its membranes. A mass consisting of three placentas was then delivered. The fetuses were all of similar size, measured from 30 to 35 cm. in length, and weighed about 800 Gm. They were well developed and lived from one to six hours. Three of the fetuses had their own membranes and independent placentas (multiovular), and two of them, probably the two males, had a common placenta and chorion, and were separated only by means of individual amnions (uniovular). The mother had a serious puerperal infection, but she recovered. The speaker recognized, as causes of multiple gestations, heredity, multiparity, age and climate. Multiple gestations are frequently observed in families with mental diseases and in women with anomalies and malformations of an atavic nature. They may be due to the father's influence. Sexual maturity is the most opportune time for these pregnancies, which generally are observed in persons more than 30 years old. The influence of climate is noticed in Russia, Sweden, France and Spain. The occurrence of twin births in Castile is not rare. Professor Villa knows of a delivery of three children and another of four, which occurred in the last few years. Five or six fetuses in a delivery are seldom viable. Prolific deliveries represent racial backwardness and a return to a type of life for which the women of today are not prepared. It is preferable that only one fetus be born and that it be healthy and strong.

Arthritis Deformans

Dr. Bastos delivered a lecture at Dr. Marañón's clinic on arthritis deformans. His work was devoted to those forms of chronic rheumatism which present pronounced local lesions and hence become surgical. It is necessary to know these rheumatic manifestations because they are of considerable importance: For each patient with tuberculosis there are three with rheumatism, and this ratio, which is large enough in itself, is still higher in some regions of Spain. On the other hand, it happens that processes which are far from being rheumatic processes are diagnosed as such. Concerning arthritis deformans, the author said that the microscopic lesions are appreciated in the first stages of the disease. These lesions produce regression of the cartilage, which is transformed into fibrous cartilage, and then the development of hemorrhagic synovitis. Concerning the pathogenesis of arthritis deformans, the speaker cited the mechanical theory which attributes the lesions of this disease to the wear of the articular surfaces, and the infectious theory, which regards the disease as a form of rheumatism produced by focal infection. Lastly, the speaker considered the constitutional factors, which contribute to the premature aging of the articulations, and the influence of certain endocrine conditions in the production of arthritis deformans.

Prize for a Paper on Medical Deontology

Dr. Sanchiz Banus, president of the College of Physicians, was recently honored by the physicians of Madrid at a banquet. A subscription fund was begun for a prize to bear his name, which will be devoted to the best paper written during the year on the following phase of medical deontology: operation of medical colleges, or social and corporative medicine.

Amplification of the Cancer Institute

The Cancer Institute, with Dr. José Goyanes as its director, has been enlarged by two new buildings. One of them is devoted to laboratories while the other has been provided with seventy beds for cancer patients from the province of Madrid. The building has been financed by the provincial deputation of Madrid. The ceremony of the inauguration was presided over by the queen, who is president of the league against cancer.

Central Dispensary of the Red Cross

The Central Dispensary of the Red Cross, under the patronage of the king and queen, has been opened for service. The Royal family and prominent government officials attended the opening ceremonies. The new building, which cost 5,000,000 pesetas (about $1,000,000), is one of the best that the Red Cross possesses. It is a masterpiece of architecture. Provisions have been made for the installation of several clinics.

Closing of Several Universities by the Government

General Primo de Rivera, as the head of the government, has aided the general progress of Spain. Public instruction and hygiene have been improved, and large amounts of money have been provided for schools, sanatoriums, parks, dispensaries, hospitals, roads and ports. His policy, however, has caused dissatisfaction and some disturbances among the students. The students of the University of Madrid protested vigorously against the permission given by the government to men of religious sects to award scientific titles and to act as jurors at the examinations of the students. The government, without giving any attention to the reason for the protests, demanded the obedience of the students, but they disobeyed the order. The police were ordered to the universities, but this act was considered, both by students and by teachers, as a violation of the rights of the university. The police fired into the air, wounding a man, but not seriously. The government then ordered the university to be closed until the fall of 1930. The students who wish to take their examinations should pay their tuition at some other university and be examined there. The students at the Universities of Barcelona (the second in Spain) and Oviedo made the same protests, and these universities also were closed by the government. In Santiago de Galicia and in Valencia, the faculties protested, and the same punishment was imposed on these universities. In Valladolid, where the disturbances have been of minor importance, the teachers have imposed another payment of tuition on the students. The students of medicine and the women students were not guilty of these disturbances, but they were also obliged to pay tuition again in order to be examined. Some of the professors who would not stand this state of affairs, resigned; others have protested in writing, and still others have declared adherence to the policies of the government. The parents of the students were affected by these disturbances more than any one else as they were obliged to make a repayment of the tuitions. They hold the teachers responsible for exerting influence on the students. In connection with the official inauguration of the

universal expositions of Sevilla and Barcelona the government has resolved to pardon the students. Thus the universities have been reopened, and university life is going on as usual.

BUCHAREST

(From Our Regular Correspondent)

May 27, 1929.

The Sight of Motor Car Drivers

According to Prof. Dr. Emile Brosz, managing director of the postgraduate medical courses in Hungary, opinions differ as to the minimum of eyesight which should be demanded of motor car drivers. Some authorities believe that motor car drivers should possess visual acuity equal to that of locomotive engineers; others believe that less is sufficient. It has been suggested that drivers be permitted to make written statements as to their fitness for driving, after which they would be held responsible for accidents and the like on the basis of these statements. The chief of police of Paris has stated that he cannot demand proof of the physical soundness of all applicants, as the medical examination of more than a hundred applicants for a driver's license daily would entail too much time and expense. Competent men, however, are urging that conditions of fitness be laid down and that a thorough medical examination of the candidates be made in every case. The question is deemed so important that the Belgian and French medical academies are dealing with the matter seriously and have advocated detailed instructions. They are not in force, however, Professor Grosz says. During the war, military commandants enforced very strict rules as to who was competent to drive military motor vehicles; this was justified, as these cars carried many soldiers. Since the termination of the war the French academy has repeatedly dealt with this problem, and one of its reports characterized the situation as follows: "To become eligible for political voting one must be 21 years of age, but any urchin suffering from bodily defect may run down pedestrians." This assertion made a deep impression, as just at that time two academicians were fatally injured in automobile accidents, and yet neither the efforts of the academy nor those of the medical society were successful. Finally, the medical members of the chamber and the senate were mobilized but they also failed in their efforts. It is noticeable also that England and Germany have failed to lay down conditions of fitness. Switzerland demands at least 5/10 visual acuity but does not exclude drivers with only one eye. The same rule holds true in Italy. In Norway a distinction is made as to the visual acuity acquired: better vision is demanded of professional drivers than of other drivers. Professor Jeandelize compiled the conditions demanded in the different countries and made the proposal to fix the minimum of visual acuity in the better eye at 5/15, with 5/100 acceptable in the other eye.

In Hungary the issue of a license is based on a medical certificate given by a city medical officer, and if he does not find the sight to be satisfactory he has to appeal to the state ophthalmologic hospital for a decision. The measurement of visual acuity, however, is not regulated. The police may refuse any applicant. The applicant then has the right to appeal to the ministry of internal affairs, in which case the ministry asks for the opinion of the supreme health board through the ministry of public welfare.

The health board maintains that if the vision of one eye is perfect or at least 5/7, a man with only one eye may get a driver's license. It is necessary that the conditions of fitness for drivers should be the same as for individuals in the railway and military services. Professor Grosz believes, on the ground of experiences gained abroad and with due respect to inland conditions, that it would be appropriate to fix the minimal acuity of the better eye at 5/10, if the vision of the other eye is as much as 5/20. If the sight of the other eye is less than 5/20, the vision of the better eye should be at least 5/7, with normal visual fields and perfect color vision. In his opinion when one eye is missing the matter should be settled individually. The loss of one eye is prohibitive in the case of a driver of an autobus and in others who carry passengers professionally, while it is permissible in the case of a driver who owns his car. He urges periodic examinations of all drivers. Motor car drivers are exposed to different injuries, which eventually may seriously interfere with their sight and other bodily and even mental functions; therefore semiannual or annual examinations are indicated. In order to settle the question in Hungary, Professor Grosz is going to ask the Society of Hungarian Ophthalmologists to discuss the matter and to pass on resolutions that are to be submitted to the national assembly.

The Perception of Changes in the Weather

At the recent meeting of the Royal Medical Society, Dr. Z. Dalmady read a paper on the perception of changes in the weather. He said that some men, particularly sick ones, can predict changes in the weather. Case histories show harmony between the weather and the condition of some patients, and statistics show an increase in certain diseases in connection with the weather. The feeling of an oncoming change in the weather is a presentiment of local atmospheric conditions, which must be distinguished from sensibility to a change in the weather. Weather feeling men may not be able to predict the exact change in the weather. The factors that act on these men must be sought among those atmospheric qualities which are experienced in a closed room as well as by clothed men in the open. According to recent observations, the presentiment of a change in the weather depends on the exchange of air masses. The determining factors may be sought in the constitution of an air current, in the nature of its suspensions and in its electrical qualities. These factors may have important rôles in changing the physical features of the air. It is probable that the presentiment of a change in the weather pertains to allergic phenomena, and in its establishment a decisive rôle is played by the physical features of the air.

Dr. M. Farkas remarked that every one is more or less of a "weather feeler." On bright, sunny days the sick man feels better, and the healthy man is refreshed—his temper is calm, and his ability to work is greater. The powers of observation of blind children are keener on bright days than in cloudy or rainy weather. Rheumatic, gouty and tabetic patients display a special sensibility toward a change in the weather; but presentiment means something different; namely, that some patients, and even healthy individuals, owing to certain bodily sensations, are reliably able to predict a change in the weather, from thirty-six to forty-eight hours in advance. The sensations cease when the rain, snow or wind storm begins, and in the interval they are quite devoid of symptoms. According to his observations there is no connection between the barometric reading and the presentation of weather feeling. During the war Farkas observed the weather feeling of soldiers with amputations, shot wounds and bayonet wounds and found that specific sensibility for a change in the weather was displayed by patients in whom the periosteum was adherent to its base and was immovable. The presentiment of weather change, a feeling undoubtedly of neuropsychic importance, is attributed by Stein to the "expectation feeling," which is regarded by the Norwegian philospher Aaro as a new elementary spiritual phenomenon. According to him, certain animals and men possess the ability to foretell changes in the weather as a result of reminiscences, mind pictures and the like, laid down in the conduction paths and condensed into instincts. This theory makes it purely a psychic phenomenon, which is not acceptable. It is more rational to assume that the presentiment of a change in the weather is the feeling of physiologic and pathologic processes going on in the body as the result of accumulated influences of changes in the weather. The con-

firmation of the connection is a logical process. Farkas believes that the problem of weather feeling will come to play a prominent rôle in the numerous problems of psychology and philosophy under dispute, because physical and psychic manifestations are presented in this particular feature, and their explanation eventually will be common and simple.

BERLIN

(From Our Regular Correspondent)

June 1, 1929.

Meeting of the Deutsche Gesellschaft für Chirurgie

(Continued from page 2183)

In the general discussion, Tönnies of Würzburg emphasized the good results secured with puncture (sometimes with lavage) in infants and young children. He reported a series of sixty-one cases with three deaths (5 per cent). In some of the patients a later thoracotomy was required, which was then well borne. Schönbauer of Vienna displayed an apparatus recommended by Demel for the aspiration of the purulent effusion. It consists of two curved trocars, which, joined together to form a circle, are connected with a tube that leads to a bottle. The suction device has given good satisfaction. Heller of Leipzig performs rib resection in severe empyemas, under differential pressure, then closes the wound and drains by the Iselin method through a newly created puncture wound into a wine bottle. In eighty-one cases he had a mortality of 24 per cent. The average period of treatment was from six weeks to two months. Only in a few cases did small plastic operations become necessary on account of residual cavities. Hosemann of Freiburg recommended for the operation on a tuberculous total empyema associated with a mixed infection the replacing of the prevertebral rib resection by a parasternal resection, which gives better results without the operation being thereby materially enlarged in scope. He has performed the operation seven times without a fatality. One patient, however, later succumbed to amyloid degeneration. Hauks of Breslau gave an account of his experiences with the use of paraffin fillings in tuberculosis of the upper lobe. He has employed the method thirty-two times during the past two and a half years, thirteen times in extensive bilateral processes, and nineteen times in unilateral tuberculosis of the upper lobe, in which latter cases partial compression is sufficient. Pneumolysis must be carefully carried out before the paraffin filling is applied. One can then feel the cavities, which are loose and flabby to the touch. The use of the paraffin fillings depends on the success of pneumolysis. The method could not be applied in ten patients, all of whom succumbed to the disease. Of the successful cases, one ended fatally on the third day from meningitis. An infection of the filling bed developed in one instance. Of the thirteen bilateral cases, five remained unchanged, four will doubtless prove fatal and three show improvement, while one patient is free from expectorations and from bacilli. The nineteen unilateral cases present a more favorable result. Nine patients are free from expectorations and from bacilli, six are improved, three are unchanged, one is worse, and one died soon from meningitis (as already mentioned).

Sauerbruch emphasized that the fundamental idea of extrapleural plastic operations is the contraction of the whole lung, and therefore the filling with paraffin should contract the whole lung. But in bilateral pulmonary tuberculosis, to which some of the reported cases belonged, a partial contraction must of course suffice. There are, however, grave dangers associated with the paraffin filling method. Perforation may result after five, seven, and even eleven years. A grave danger is associated with the method in exudative tuberculosis, since, following the implantation of the paraffin fillings, a more rapid general intoxication may intervene. The local reaction on the right auricle and the right side of the heart may be so great that it will become necessary to remove the paraffin filling. It is also very difficult to decide whether the compression is sufficient. However, the paraffin filling is the best type of filling as yet discovered.

GEOGRAPHIC AND SOCIAL INFLUENCES IN VARIOUS DISEASES

Professor von Haberer of Düsseldorf discussed geographic and social influences in relation to the various diseases with which he had become familiar during his seventeen years of activity in the Alpine regions of Austria (Tyrol, Styria, Salzburg, Carinthia) and in his present field of activity (Düsseldorf). In Tyrol there were few cases of cancer, whereas in Styria many cancerous conditions were observed, especially in the capital city (Graz). Whereas in the Alpine regions there was a considerable number of goiters, there were, in contrast with Düsseldorf, few cases of exophthalmic goiter. With reference to other diseases, many peculiar differences were noted. Whereas in the Alpine regions von Haberer could make frequent use of local anesthesia, in Düsseldorf, on account of the marked sensitiveness of the population (men as well as women), he had to give it up almost entirely and resort more to inhalation anesthesia. He emphasized also the entirely different mentality of the patients in the industrial region about Düsseldorf, which expressed itself in a different attitude toward their ailments and their physician; for instance, in the lack of "will to recover" that is evidenced by the population entitled to the benefit of social insurance. This attitude was observed more particularly in his patients operated on for gastric or duodenal ulcer. In Innsbruck or Graz, about 95 per cent of such patients recovered and were free from all symptoms, while in Düsseldorf he could note a difference between the so-called private patients (who were well satisfied with the operative result) and the patients who were insured in the *krankenkassen*. The majority of the latter class complained, after the lapse of varying periods following the intervention, of discomforts for which a thorough examination revealed neither clinical nor roentgenologic basis. Haberer called attention also to the peculiar gravity of the disorders of the biliary tracts, as encountered in the industrial region, which induced him to give up almost entirely closure without drainage, which he had been able to employ in the Alpine regions in 70 per cent of the cases, by reason of the gravity and frequency of the accidents and the great number of postoperative pulmonary disorders and embolisms.

URETERAL CALCULUS

Professor Voelcker of Halle presented a comprehensive paper on ureteral calculus. He distinguished two large groups of cases: the aseptic and the infected cases. The former often develop unexpectedly, an attack of colic being the first symptom, and may be difficult to distinguish from cholecystitis, appendicitis, ileus and the like, especially if they are located on the right side. A roentgen diagnosis is not always possible, and the characteristic symptom of microscopic hematuria occurs also in appendicitis. But for the operative indications the diagnosis is of the greatest importance, since in renal calculus an immediate operative intervention, as in the other diseases mentioned, is not an open question. The question as to the treatment of acute aseptic renal calculus may be solved by spontaneous elimination of the stone, or the colic may stop although the stone has not been passed. The checking of the colic is often occasioned by the blocking of the ureter; for, according to Voelker, the colic is caused chiefly by the stasis of urine. The stoppage is often caused by the lodging of a stone at one of the three natural narrow places of the ureter. The result is the swelling of the kidney. In such cases a cystoscopic or chromocystoscopic examination should be made, and, above all, ureteral catheterization should be employed. Often that alone will effect a passing of the stone or cause the stone to be pushed into the renal pelvis and thus eliminate the stoppage of urine and the colic. If all

measures fail (possibly including the injection of spasmogenic remedies into the ureter and paravertebral anesthesia), ureterotomy, with subsequent primary suture, is the preferred operation in these acute aseptic cases. If the stoppage of urine and colic cease without the stone being passed, the picture of chronic aseptic ureteral calculus is produced. While it is true that such stones often may be carried for years without any particular harm to the kidney resulting, and that they may be spontaneously passed after many years, it is nevertheless to the advantage of the carrier if its removal can be effected; for the pathologic aspects of the condition may come to resemble those of gallstones. Colic-free periods may alternate with severe attacks of colic, and there is constant danger of infection and damage to the kidney. These attacks are sometimes referred to as attacks of renal calculus, which is not quite accurate, since the stones do not cause colic, as a rule, until they descend into the ureter. Voelcker discussed the various diagnostic aids: rectal and vaginal examination, cystoscopy, ureteral catheterization, wax sounds that take an impression of a stone if present and acoustic sounds (both uncertain procedures), and roentgen examination. By way of treatment, one may consider lavage of the kidneys with large amounts of fluids (mineral water, from one to two liters of tea, with addition of from one to two tablespoonfuls of glycerin, the urine to be held as long as possible and then quickly evacuated), use of antispasmodic substances (atropine, morphine, and hypophysin, which stimulates peristalsis but apparently does not act directly on the ureter); and the subaqueous intestinal bath. He mentioned also the injection of oil or glycerin into the ureter, various analgesic remedies, including papaverine, and procedures of instrumentation, principally the gradual dilation of the ureter by the Burger method. He was inclined to disparage other instrumental measures. Voelcker rejects also the use of the retention catheter in the ureter. The treatment may be extended over a long period, but care must be taken that no renal injury, infection or hydronephrosis develops. There may be primary infection due to ureteral calculus, or secondary infection. Frequently, phosphates are involved, which have a rough surface and hence do not pass out so readily. They cause stoppage of the urine less frequently, and, because of the inflammatory changes in the ureteral wall, they are held less tightly. As they are, for the most part, calcareous, the diagnosis is facilitated by the use of the roentgenogram. Here, too, a distinction must be made between the cases with and without stoppage of the urine. In the latter cases, internal treatment is usually ineffective, and endovesical treatment is not to be recommended. Thus, after exact testing of the functioning of the organs involved, operative treatment is to be considered. If the kidney is to be preserved, ureterotomy is indicated. Operative intervention is easier in the infected cases, by reason of the somewhat thickened ureteral walls, than in the aseptic cases. If the kidney cannot be preserved, it must be removed. In these cases, one need not bother about the stone at first—it can be removed later. In the cases of acute stoppage of the urine, in which the patient's life is threatened, if it is not possible to bring relief with the ureteral catheter, attention must be centered on the kidney, and, if it cannot be preserved, it must be removed or a renal fistula must be constructed and no attention need be paid for the time being to the stone, which can often be removed by suction, through the constructed fistula. The most difficult cases are those with bilateral calculi, which may lead to complete anuria. In aseptic cases, complete anuria may be endured up to fourteen days. If the roentgenogram and the urologic examination do not make it evident which side is more gravely involved, and the anamnesis does not help to decide, both kidneys must be exposed and the one that, after palpation, appears to be more seriously involved must be operated on. Voelcker discussed, then, the operative technic for the exposure of the ureter in its various portions, and recommended the median incision for deep-lying stones.

(To be continued)

Marriages

WALTER DRURY HAWKINS, Harrisburg, Pa., to Miss Elizabeth Shorkley Hobart of New Cumberland, April 6.

RALPH SHAW GRAHAM, Elyria, Ohio, to Miss Elizabeth Frances Herr, at Moorestown, N. J., June 15.

RICHARD DALE HOPKINSON, Jenkintown, Pa., to Mrs. Leona Alexander Davis of Philadelphia, April 24.

LODOVICO MANCUSI-UNGARO, Newark, N. J., to Miss Frances Groves Chambers, at Philadelphia, June 12.

RICHARD D. EVANS, Santa Barbara, Calif., to Miss Elizabeth Bristol of Long Island, N. Y., recently.

F. WILLIS ALMOND, Boise, Idaho, to Miss Florence Maye Hardisty of Jennings, Kan., March 17.

ALEC MCMURCHIE AGNEW to Miss Pauline Creelman, both of Vancouver, B. C., Canada, May 3.

GEORGE SWARTZ KLUMP to Miss Elizabeth Marsden Winner, both of Williamsport, Pa., May 15.

WILLIAM D. LASWELL, Kings Mountain, Ky., to Miss Lucile M. Young of Highland, June 5.

MARK GREER to Miss Oris Camille Klasing, both of Vandalia, Ill., at New York, June 14.

DAVID J. HETRICK, Harrisburg, Pa., to Miss Gladys Kerlin of Altoona, May 1.

MEAD BURKE, Madison, Wis., to DR. MYRA EMERY of Kenosha, May 18.

JAMES D. BRITTINGHAM, Philadelphia, to Miss Janette Wallace, June 12.

ARTHUR B. LIGHT, Philadelphia, to Miss Mary Glover of Boston, recently.

JUDSON I. DOSS to Miss Artie Bolin, both of Milton, Ill., June 7.

Deaths

Edgar Orrin Crossman ⊕ Washington, D. C.; University of Vermont College of Medicine, Burlington, 1887; medical director of the U. S. Veterans' Bureau; member of the American Psychiatric Association and the New England Society of Psychiatry; member and past president of the New Hampshire Medical Society; formerly professor of mental diseases at his alma mater; aged 64; died, June 21, at his summer home in Bedford, N. H., of pneumonia.

Albert Richard Thomas, New Orleans; Tulane University of Louisiana School of Medicine, New Orleans, 1919; member of the Louisiana State Medical Society; formerly assistant in clinical gynecology at his alma mater; served during the World War; aged 36; resident surgeon at the City Hospital for Mental Diseases, where he died suddenly, June 9, of heart disease, six days after an operation to remove a collar button which had lodged in his lung.

Frederick Andrew Bonthius, Pasadena, Calif.; Northwestern University Medical School, Chicago, 1902; at one time clinical assistant in medicine at his alma mater; served during the World War; formerly on the staff of the Los Angeles General Hospital; aged 55; died, April 6, in a local hospital, of metastatic carcinoma of the liver.

Thomas Bernard Carpenter ⊕ Buffalo; Harvard University Medical School, Boston, 1890; associate professor of genitourinary surgery, University of Buffalo School of Medicine; formerly city bacteriologist; on the staffs of the Buffalo General Hospital and the Buffalo City Hospital; aged 60; died, May 27, of tuberculosis.

Albert Earl Mowry ⊕ Chicago; Northwestern University Medical School, Chicago, 1898; formerly on the faculty of his alma mater; member of the American Urological Association; veteran of the Spanish-American and World wars; on the staff of the Provident Hospital; aged 55; died, June 16, from hemiplegia.

Charles William Bartlett, Tampa, Fla.; University of Maryland School of Medicine, Baltimore, 1893; member of the Florida Medical Association; past president of the Hillsboro County Medical Society; veteran of the Spanish-American War; city health officer; aged 59; died suddenly, May 29, of heart disease.

⊕ Indicates "Fellow" of the American Medical Association.

Clarence E. Reed, Petaluma, Calif.; Medical Department University of California, 1883; member of the California Medical Association; aged 65; died, June 2, at the Stanford University Hospital, San Francisco, of complications resulting from injuries received a year and a half ago in an automobile accident.

John Mockler Conroy ⊕ Bayfield, Wis.; University and Bellevue Hospital Medical College, 1899; medical director and superintendent of the Pureair Sanatorium; veteran of the Spanish-American and World wars; aged 62; died, June 3, of cerebral hemorrhage.

John Edward Dwyer, Cambridge, Mass.; Bellevue Hospital Medical College, New York, 1887; member of the Massachusetts Medical Society; aged 65; for many years a member of the staff of the Holy Ghost Hospital, where he died, June 10, of cerebral hemorrhage.

Clarence Logan Six, Stockton, Calif.; Starling Medical College, Columbus, 1901; member of the California Medical Association; served during the World War; aged 53; died, May 28, at the home of his sister in Santa Barbara, of cerebral hemorrhage.

Daniel Elliott, Newark, N. J.; Medical Department of Columbia College, New York, 1881; member of the American College of Physicians; aged 73; died, June 6, at the Newark Memorial Hospital, of hypertrophy of the prostate and uremia.

Byron Alexander Watson, Washington, D. C.; Meharry Medical College, Nashville, 1916; aged 42; died, May 31, at Freedmen's Hospital, of abdominal injuries received in an altercation with an unidentified person the previous day.

William Huber Van Doren ⊕ Chicago; Eclectic Medical Institute, Cincinnati, 1896; aged 55; on the staffs of the North Chicago Hospital and the Evangelical Deaconess Hospital, where he died, June 13, of heart disease and nephritis.

Robert Uniacke Jeffery, Essondale, B. C., Canada; University of Manitoba Faculty of Medicine, Winnipeg, Manit., 1925; aged 27; died, May 2, at the Kings County Hospital, Seattle, of pleurisy and lobar pneumonia.

William Edwin Atkins, Terrell, Texas; Memphis (Tenn.) Hospital Medical College, 1890; member of the State Medical Association of Texas; on the staff of the Terrell State Hospital; aged 76; died, June 1, of heart disease.

James Thomas Madden, New York; Medical Department of the University of the City of New York, 1893; member of the Medical Society of the State of New York; aged 61; was found dead, May 27, of heart disease.

Aaron Bruce Barnett, Wheeling, W. Va.; University of Maryland School of Medicine, Baltimore, 1879; member of the West Virginia State Medical Association; aged 82; died, June 1, at the Ohio Valley General Hospital.

James Oswald Donaldson, Pittsburgh; Western Pennsylvania Medical College, Pittsburgh, 1904; member of the Medical Society of the State of Pennsylvania; aged 53; died, February 12, of cerebral hemorrhage.

Guiseppi Monaco, Oak Park, Ill.; University of Naples, Italy, 1898; formerly on the staff of the Mother Cabrinia Hospital, Chicago; aged 58; died, May 30, at the University Hospital, Chicago, of lobar pneumonia.

Ann Pauline Warfield Stires, Malvern, Ohio; Ohio State University College of Medicine, Columbus, 1921; aged 33; died in June, at the Aultman Hospital, Canton, while under an anesthetic during an operation.

Lewis E. Souder, Chamois, Mo.; National University of Arts and Sciences, Medical Department, St. Louis, 1913; member of the Missouri State Medical Association; aged 51; died, April 12, of coronary sclerosis.

Harry Raymond Welch, Salt Lake City, Utah; Hahnemann Medical College and Hospital, Chicago, 1905; member of the Utah State Medical Association; aged 50; died, May 27, following a mastoid operation.

John Marshall Bertolet ⊕ Reading, Pa.; Jefferson Medical College of Philadelphia, 1896; for twenty-eight years a member of the staff of the Reading Hospital; aged 71; died suddenly, June 9, of heart disease.

Horace Andrew Gilliam, Lamesa, Texas; Medical Department University of Tennessee, Nashville, 1908; served during the World War; aged 50; died, May 20, of hypertension, heart disease and nephritis.

Clarence Augustus Norris, Manasquan, N. J.; Hahnemann Medical College and Hospital of Philadelphia, 1901; aged 51; died, May 30, at the Fifth Avenue Hospital, New York, of peritonitis.

James Percival Dalbey ⊕ Gettysburg, Pa.; University of Pennsylvania School of Medicine, Philadelphia, 1901; aged 50; died, June 9, at the Harrisburg Hospital, of ruptured appendix and peritonitis.

William John Fleming ⊕ Troy, N. Y.; Albany Medical College, 1891; past president of the Rensselaer County Medical Society; health officer of Troy; aged 58; died, May 19, of heart disease.

William H. Howey, Sudbury, Ont., Canada; McGill University Faculty of Medicine, Montreal, Que., 1878; formerly member of the provincial board of health; aged 78; died, March 21.

Donald Cattanach McLachlan ⊕ Portsmouth, N. H.; McGill University Faculty of Medicine, Montreal, Que., Canada, 1904; on the staff of the Portsmouth Hospital; aged 50; died, May 12.

Niels Christian Beck ⊕ Denver; Denver and Gross College of Medicine, 1907; aged 53; formerly on the staff of the Mercy Hospital, where he died, March 29, of pulmonary tuberculosis.

George Mann Abbott, Saranac Lake, N. Y.; Albany Medical College, 1879; member of the Medical Society of the State of New York; aged 74; died, June 1, of cerebral hemorrhage.

J. A. Faulkner, Keithsburg, Ga.; Georgia College of Eclectic Medicine and Surgery, Atlanta, 1912; member of the Medical Association of Georgia; aged 42; died, May 17, of endocarditis.

John Boadley Hill, Glendale, Ariz.; College of Physicians and Surgeons, Keokuk, Iowa, 1881; Jefferson Medical College of Philadelphia, 1887; aged 72; died, May 28, of arteriosclerosis.

John A. Harmon, Crab Orchard, Ky.; Hospital College of Medicine, Louisville, 1906; member of the Kentucky State Medical Association; aged 51; died, May 15, of encephalitis.

Sherwood Abel Holcomb ⊕ Palenville, N. Y.; Medical Department of Columbia College, New York, 1887; aged 65; was found dead, June 3, of a self-inflicted bullet wound.

William Coe McKeeby, Syracuse, N. Y.; University of Maryland School of Medicine, 1887; aged 64; died, May 28, at his summer home in Branchville, N. J., of pneumonia.

Alfred W. Perry, San Anselmo, Calif.; New Orleans School of Medicine, 1862; Civil War veteran; formerly member of the board of health; aged 87; died, May 29, of senility.

Joel Frampton Wyman, Aiken, S. C.; Medical College of the State of South Carolina, Charleston, 1881; aged 74; died, May 30, of chronic tuberculosis and pneumonia.

Richard J. Brown, Jamestown, N. Y.; Albany Medical College, 1882; aged 68; was instantly killed, May 9, by an automobile, while alighting from a street car.

Albert F. Stone, Bay City, Mich.; Detroit College of Medicine and Surgery, 1910; on the staff of the Mercy Hospital; aged 43; died in May, of heart disease.

Roland English Hartley, San Francisco; Cooper Medical College, San Francisco, 1889; aged 66; died, June 1, of myocarditis, uremia and chronic nephritis.

Caleb Andrew Pritchard, Indianapolis; University of Louisville (Ky.) School of Medicine, 1888; aged 67; died, June 8, acute dilatation of the heart.

Kenneth Taylor Hunter, Newmarket, Ont., Canada; University of Toronto Faculty of Medicine, 1927; aged 25; died recently, in England, of meningitis.

William Turbin Holland Brantley, Bethel, N. C.; Medical College of Virginia, Richmond, 1927; aged 37; died, May 15, of acute nephritis.

Edwin C. Ireton, Marathon, Ohio; Medical College of Ohio, Cincinnati, 1889; aged 60; was killed, June 3, near Batavia, in a bus accident.

George Baker Wood, Sioux City, Iowa; Chicago Homeopathic Medical College, 1898; aged 58; died suddenly, June 4, of heart disease.

Walter B. Phillips, Sherman, Miss.; Medical College of Alabama, Mobile, 1877; aged 74; died, May 10, of chronic myocarditis.

Alfred Bein ⊕ Chicago; College of Physicians and Surgeons, Chicago, 1897; aged 53; died, June 8, of chronic nephritis and uremia.

David Fletcher Lee, Indianapolis; Medical College of Indiana, Indianapolis, 1883; aged 69; died, June 8, of angina pectoris.

Erskine Johnstone Keir, Alberton, P. E. I., McGill University Faculty of Medicine, Montreal, 1891; aged 60; died, April 8.

George S. Chamberlain, Catalina, Nfld. (licensed, Newfoundland, 1904); aged 89; died, January 1, of influenza.

Bureau of Investigation

THE GLOVER HEIGHT-INCREASING FRAUD

Another Fake Debarred from the United States Mails

Clara Louisa Glover and "Bernard Bernard" (the latter's real name, according to the federal authorities, is Trappschuh) were engaged in exploiting a device for the alleged purpose of increasing the height of those who desired to be taller. Neither Glover nor Trappschuh is a physician. Trappschuh, in fact, under the name "Bernard Bernard," publishes books on sexual subjects and fad diets. More than a year ago the postal authorities notified these people that they were to be called on to show cause why a fraud order should not be issued against "L. Glover, Specialist," which was the trade name under which this fake was exploited from Sausalito, California. Glover and Trappschuh (Bernard) both appeared at the hearing. Trappschuh claimed to have invented the device, although no mention is made of this fact in the advertising and Trappschuh's name is carefully left out of all advertising connected with the sale of the device.

The device itself consisted of two canvas bands sewed together at each end and intended to be placed about the head of the user, in the manner of a halter. There were pieces of sash cord for suspending the canvas bands from an overhead beam. There were, also, two hand grips, likewise to be suspended from overhead by means of two screw hooks. The device permitted adjustment to a height which would barely enable the user to touch the floor with his feet, thus throwing the weight of the body on the user's neck. The hand grips were for the purpose of relieving the strain upon the neck when it became too severe. The device cost 75 cents to make; it was sold for $8.50!

With the sale of the "halter" there were a number of pages of mimeographed matter called "lessons" and containing a series of exercises that were to be performed either with or without the apparatus. The report of the federal authorities states that, upon cross-examination, both Miss Glover and Trappschuh (Bernard) showed a marked lack of familiarity with the contents of their own "lessons!"

SHORT FELLOWS DON'T GET FAR—
But You Can Make Other Folks Look UP To You!
GROW TALLER NOW
The Story of Two Men and a Girl—
PAUL ANDREWS
Vice-President

Victims were obtained by inserting in magazines an advertisement similar to the smaller illustration that is reproduced with this article. Accompanying the so-called lessons was circular matter advertising books with suggestive sex titles, as well as other books written by Trappschuh (Bernard), and sold by his concern under the name, "Health and Life Publications" of Chicago, Illinois. Within the lessons was the recommendation that the victims purchase Bernard Bernard's book, "Correct and Corrective Eating." When the Bureau of Investigation looked into this fraud in the latter part of 1926, it was found that the advertising was being handled by R. B. Newell Company, Chicago, the same concern which also handled the advertising of "Bernard Bernard's" very sexy books.

Trappschuh himself, the inventor of the device for increasing height and the exploiter of the claim that, by means of his apparatus, one could increase his height approximately a head and a half, is only five foot one! When called on at the government hearing to perform the "exercises" described in his "lessons," he admitted that he could not do so without constant reference to his own "instructions." When asked why he had not increased his own stature, his excuse was that he had not had time to take the "course." He claimed, according to the government report, that he would like to get out of the "runt" class, and the Solicitor for the Post Office Department, in his Memorandum to the Postmaster General, recommending the issuance of a fraud order, said he was convinced that if Trappschuh (Bernard) really believed that he could increase his height by his own apparatus, he would long since have done so.

Grow Taller
Science has found the way to add inches to your height. No need to envy and look up to the big fellows. No need to have the disadvantages of the little man. This course makes it possible for you to be on a level with your fellow men. Course is easy, inexpensive and results sure. Mail coupon for free information today!
L. GLOVER,
Room 49, 459 San Carlos Ave., Sausalito, Calif.
Without any obligation to me, send me full information on how to grow taller.
Name.....
Street.....
City.....

C. L. Glover, the other party called, was a tall woman of thirty-eight. She stated at the hearing that she had not used the "course" nor the device as she had no need of it. The Solicitor for the Post Office states in his Memorandum that the majority of the victims of the scheme seem to have been young fellows under twenty-five years of age. To quote from the Memorandum:

"It clearly appears from the evidence that this scheme is designed to prey principally upon immature young men. The promoters indicate [in their advertising] that the natural growth stops at nineteen. They admit here [at the hearing] that, in a great many instances, it does not stop until the age of twenty-five. However, this fact does not prevent their publishing in their literature statements from boys eighteen to twenty-five years of age who claim that their height has been increased through this so-called course.

"In the investigation, the inspector obtained from the promoters the names and addresses of persons whose statements are published in a booklet which forms a part of the promoters' literature. The promoters admitted that in none of the cases where such statements are employed has the consent of the writer been obtained for their use in the literature. The inspector wrote these persons and in the majority of instances the boys advised him that they had not gained the remarkable height increases reported, or in fact any increase. Those who stated that they had gained were almost invariably under twenty-five years of age.

"The promoters admitted that they had not checked up on a single case in which a gain in height has been reported to them as a result of following this so-called course.

"In the literature employed by the promoters is what purports to be a reproduction of an article by L. Glover (Height Increasing Specialist) from 'Health and Happiness,' Bernard

Bernard publication. This alleged article is entitled, 'The Ductless Glands and Their Effect Upon Growth.' In this article Miss Glover states: 'I am a specialist in height increasing and I have devoted my life to studying every means and method by which the human body may be increased in size all over, but more particularly upward.'

"Miss Glover's testimony at the hearing showed the falsity of this and other statements in the article. Neither she nor Bernard Bernard, from their own testimony, is competent to write upon the ductless glands and their effect upon growth."

It was brought out at the hearing that over $26,000 had been obtained from the public since the inception of the scheme. As a result of the investigation, with the recommendation of the Solicitor for the Post Office Department, the Postmaster General on March 23, 1928, closed the mails to "L. Glover, Specialist," and "L. Glover" at Sausalito, California. The easy money, however, was too strong a temptation and Glover and Trappschuh transferred their operations from California to Trappschuh's own headquarters in Chicago. Here they continued advertising the device under the trade name, "Glover Institute," which operated from 508 South Dearborn Street, the headquarters of Trappschuh's publishing outfit. These facts coming to the attention of the postal authorities, the Solicitor for the Post Office Department, in another Memorandum to the Postmaster General dated April 18, 1929, recommended an extension to the fraud order that was issued a year previously, so as to cover the name of the Glover Institute at Chicago. The order was issued April 20, 1929.

Correspondence

RUPTURE OF GALLBLADDER THROUGH THE ABDOMINAL WALL

To the Editor:—Already several cases have been reported in The Journal, notably in the issue of May 4, page 1541. I published the records of a case under the title "Gall-Stones" in the *Annals of Gynecology and Pediatry* (**15,** June, 1902). The report of these cases was read before the New Hampshire Medical Society at Concord, May 15, 1902.

William H. Nute, M.D., Exeter, N. H.

THE TERM "MEXICAN"

To the Editor:—As officer in charge of the interchange office of the department of public health in Mexico, I receive from the United States several bulletins of the departments of public health of different states and counties. In these bulletins I have noted that the term "Mexican" is used incorrectly as denoting a certain race or color. In the interest of uniformity and truth in the basis of classification in vital statistics, I take the liberty to discuss the subject. In Mexico there are many white inhabitants with Mexican nationality, chiefly of Spanish origin. The rest of the population is composed of pure Indians, mixed Indians and white, negro, mixed negro and white (mulatto) and mixed Indian and negro. The word "Criollo," or creole, is used to designate the pure Spanish white inhabitants.

Even among the Indians there are different types, and there is great difference between the Aztec and the Maya Indians, not only racially but also in type of civilization.

In the basis of classification of races or color, Mexicans can be classified as Indians, white and negro according to the predominance of race in the individual; otherwise there is no scientific use for such classification.

Perhaps it would be of use to make a distinction between the American Indian and the Mexican Indian, which are also different in race and type of civilization.

The wrong use of the term Mexican is especially observable in California. F. P. Miranda, M.D., Mexico City.

Queries and Minor Notes

Anonymous Communications and queries on postal cards will not be noticed. Every letter must contain the writer's name and address, but these will be omitted, on request.

CHROMIUM PLATING

To the Editor:—It has been suggested that we write to you for information regarding danger, if any, to workmen employed in a chrome plating plant. We have been told that the constant inhaling of fumes from a chrome plating tank is injurious and may do some permanent injury. X. Y. Z.

Answer.—At present chromium plating is a popular method for obtaining highly polished metal surfaces for such appliances as automobile lamps. This method of plating has long been known, but only within the last five years has it come into prominence. The methods now in use must still be regarded as in the experimental stage, as frequent process changes are made in various plants.

Four related forms of chrome lesions are recognized, but only three of these are at all frequently observed. The first is the slow, practically painless ulceration of the nasal septum. The greater likelihood of necrosis of the septal tissues over other portions of the nasal fossae is due to the limited blood supply to the septum. The ulceration due to chromium may extend upward to the junction of the septum with the ethmoid and backward to the vomer. The anterior portion of the septum is practically never destroyed. Deformity is therefore infrequent. Disability insurance has recently been denied certain workers suffering from extensive ulcerative effects from chromium on the ground that no disability and no deformity resulted from this type of lesion.

The second type of action of chromium is a dermatitis, usually of the hands and forearms, presenting the usual characteristics of dermatitis venenata. This type of lesion is liable to become involved in a secondary pyogenic infection.

A third variety is found in the so-called chrome holes, which are sharply demarcated, deep, resistant ulcers, usually of the hands, forearms, toes or nostrils.

The fourth condition is systemic poisoning from chrome, of which little is conclusively known. Nephritis has been described as concomitant to the chromium dust inhalation. Respiratory tract inflammation is a probable result.

In the aggregate of all forms of manifestations as many as 83 per cent of the workers exposed to chromium in certain factors have exhibited involvement.

Bloomfield (*Pub. Health Rep.* **43**:2330 [Sept. 7] 1928) thus summarizes his investigation:

Natural ventilation is seldom, if ever, adequate to remove the chromic acid spray produced during chromium plating.

Vertical ventilation, such as is commonly used in chemical hoods, is ineffective because it draws the chromic acid spray past the face of the operator who is working over the tanks.

It is feasible by a properly designed system of transverse ventilation, with an adequate air velocity, to reduce the content of chromic acid to less than 1 milligram in 10 cubic meters of air.

Continuous daily exposure to concentrations of chromic acid greater than 1 milligram in 10 cubic meters is likely to cause definite injury to the nasal tissues of the operators.

The most efficient method of ventilation is to draw the air laterally across the top of the plating tanks into ducts from 1 to 2 inches wide and extending fully along one or more sides of the tank.

To be effective, the duct should not be required to draw the air a lateral distance of more than 18 inches. For wider tanks there should be ducts on both sides, or else two ducts in the center.

The level of the plating solution should be at least 8 inches below the top of the tank and the duct should be at the top of the tank.

For effective ventilation it is necessary to have an air velocity at the duct of about 2,000 feet per minute.

Care should be taken to avoid obstacles to the air current, such as large projecting anodes or racks.

A hood surrounding one or more sides of the tank may be advantageous in protecting against disturbance by other air currents, such as those from open windows or from other fans.

The air velocity in the duct can be measured by means of a kata thermometer.

A vane anemometer is usually too large to measure the air velocity in the duct. It may, however, be used to measure the air velocity at the outlet of the exhaust flue, from which measurement the volume of air and hence its velocity in the duct may be computed.

The air may be sampled as rapidly as 35 liters per minute by means of an exhaust and an impinger bottle containing normal sodium hydroxide solution.

The amount of chromic acid absorbed from the air can be determined by titration with iodide and thiosulphate, or, if present in minute amounts, by a colorimetric test with hematoxylin.

The operators should guard against injury to the nasal tissues by applying to them, several times daily, petrolatum or mentholatum salve.

Rubber boots, gloves and aprons should be used when feasible to prevent contact of chromic acid with any abraded skin.

If gloves are not used, the hands should be washed frequently with water, and all cuts or abrasions greased with a mixture of three parts petrolatum and one part hydrous wool fat.

All floors near the plating tanks should be frequently washed down.

Operators should have periodic medical examinations, with prompt treatment of the slightest skin or nose affections.

Such treatment should include washing with bisulphite, ammonium polysulphide, or thiosulphate solution, application of an ointment, and a waterproof covering.

Bloomfield's injunction to make use of protective clothing is justified but carried out with difficulty. One chrome plating factory supplied all exposed workmen with long rubber gloves. Shortly thereafter the incidence of chrome inflammation of the hands and forearms increased. This was readily traced to certain operations calling for the upward extension of the arms in racking the wet materials. On such movements, the chrome solutions ran off the wet gloves onto the shoulders and upper arms; when the arms were lowered, these irritating materials then drained into the open-topped gloves. Snug fitting gloves such as surgeons wear have no place in this industry and the heavy kinds actually worn do not occlude the entry of harmful materials. McCord has suggested, as a possible practical substitute for gloves, the application once or twice during the work period of water and acid insoluble soap solutions. Such solutions when dry afford a protective barrier against the action of these irritants.

The continued extension of this form of plating invites further medical investigative work.

POSSIBLE MALINGERING OR NEUROSIS AFTER TRAUMA

To the Editor:—I have a case of head injury of three years' standing which is attended with headache, dizziness, roaring noises in the head and nausea when the patient tries to work. After working for an hour or two he becomes so dizzy and his head aches so much that he is compelled to rest so long that he cannot find any constant regular employment. He cannot work before any moving machinery for any time without becoming so dizzy that he is forced to quit after a half hour. At such times he has severe headache and the other symptoms mentioned. Is there any way of curing or benefiting such a patient to the extent that he can work continuously? Is there any literature on the subject of treatment of any value? Are there any reliable tests for detecting malingering in such cases?

A. L. HALL, M.D., Fulton, Calif.

ANSWER.—The symptoms outlined in the case cited are purely subjective and no facts are given of the degree of injury or the facts surrounding it which would permit an answer whether the condition is one of simulation or is due to some organic lesion. If all questions of compensation have been settled definitely, it is usual for the symptoms to improve and for the condition to become more nearly normal within three years when there has been no actual injury to the brain. There is no set of reliable tests for malingering—a term that implies intentional deception for the purpose of gain of some kind. The only criterion is a thoroughly carried out investigation with a diagnosis by exclusion. The literature on the subject of head injuries is large and there has been much research, both experimental and histopathologic, in recent times. Penfield has seen striking improvement in certain cases of prolonged headache after head injury from encephalography performed for purposes of diagnosis. The wise procedure in a case of this type is the reference of the patient to a competent neurosurgeon for detailed study.

SALIGENIN AS LOCAL ANESTHETIC

To the Editor:—Kindly inform me as to the duration of anesthesia following the use of saligenin (salicain) $C_6H_4OHCH_2OH$ when used in blocking a nerve. Also how does this compare in duration to the effect produced by quinine and urea hydrochloride? Has any one noted any permanent change in nerve structure following the use of saligenin as an anesthetizing agent? In what strengths may one safely use quinine and urea hydrochloride without fear of its causing induration and sloughing in the anesthetized tissues? Could one use it safely in 2 per cent or 3 per cent solution? Does saligenin in aqueous solution deteriorate on standing or is it stable?

C. H. KNAUER, M.D., Mahanoy City, Pa.

ANSWER.—Saligenin (Salicain) was synthesized and described as a local anesthetic by Hirschfelder (*J. Pharmacol. & Exper. Therap.* **15**:237, 1920). According to this author, this drug is the most effective and least toxic of the phenylcarbinols and has been used in 2 per cent solutions for tonsillectomies and minor surgical operations in the surgical department of the University of Minnesota. In 2 per cent solution it is claimed not to produce any edema in men and is much less toxic than procaine hydrochloride. On standing, it oxidizes into salicylic acid. There is no extensive clinical evidence that this drug is superior to procaine, unless the correspondent has a prolongation of local anesthesia in mind. No data are available as to its action on peripheral nerves and duration of anesthesia in man. Saligenin was omitted from New and Nonofficial Remedies in 1926 because the accepted brands had been taken off the market (*Rep. Coun. Pharm. & Chem.*, 1926, p. 53).

The use of quinine and urea hydrochloride has been particularly advocated by Hertzler (The Technic of Local Anesthesia, St. Louis, C. V. Mosby Company, 1928), who uses a 0.75 per cent solution. In tonsillectomies and rectal work, higher percentages may be used. The fibrosis following such injections is considerable; the danger of necrosis is always present.

ECZEMA FROM MULTIGRAPH INK

To the Editor:—Recently I have seen two young women who have their right hands affected with eczema. One who has been working with a multigraphing machine, using purple and less frequently black ink, developed an irritation of her hands, resulting in a chronic eczema with red, swollen lesions which at times have small pustules with itching. The other girl has been working in the same company doing multigraphing, and she, too, has developed an irritation of her hands and has at this time a vesicular eczema. Is the occupation a common or unusual cause of eczema of the hands? Will ink cause eczema? Is there any book published and on the market which will give more information along this line than R. Prosser White's last edition of "Occupational Affections of the Skin"? Please omit name.

M.D., Iowa.

ANSWER.—Inks, especially green ink on stocks and bonds and rotogravure ink, may cause dermatitis. It would be well to have the patients remain away from work for one week to determine whether the irritant is in the home or the office. If the patients come in contact with primroses, these should be destroyed. The method to be pursued in detecting the irritant is largely one of trial and error. The most comprehensive work on the occupational dermatoses is one that recently appeared in German and was reviewed in THE JOURNAL, Sept. 24, 1927, p. 1083 (Ullmann, Karl; Oppenheim, Moriz; and Rille, J. H.: Die Schädigungen der Haut durch Beruf und gewerbliche Arbeit, Leipzig, Leopold Voss, 1926).

PAINS IN LIMBS AS VASOMOTOR NEUROSIS

To the Editor:—I have under my care two girls, cousins, whose fathers are twin brothers. Both of these children, as well as the father of one, give a history of frequent attacks of sharp pains in the legs and forearms. These occur mostly at night, causing the patient to waken, and are severe; the duration is from five to fifteen minutes. Occasionally they occur during the day as well. The pain is steady, dull, and apparently in the muscles; the limb is tender during the attack. Partial relief is obtained by heat. The attacks are not influenced by season or temperature; in the father, excessive activity predisposes to attacks, while in the children it apparently is not a factor. A temporary decrease of muscle strength in the affected limb has been noted, but no other nervous disturbance. Tonsillectomy has been without effect in two of the patients. Of peculiar interest is the fact that a very similar complaint has been traced through five generations. The pains began in early infancy and continue throughout childhood; in some cases permanent relief is obtained during adolescence, while many of those affected continue to suffer such attacks, at frequent intervals, throughout their lives. I am unable to discover any signs of epilepsy, migraine or other hereditary disease. Except for the fact that the symptoms begin in early life and tend to be hereditary, without relation always to season, I might suspect a rheumatic condition in the muscles. I am unable to find in the literature anything suggesting hereditary myalgia existing as a clinical entity. Routine examinations have been largely negative. Tests for tuberculosis, syphilis and tetany have been negative. Please omit my name.

M.D., Minnesota.

ANSWER.—The condition described seems to belong under the general group of vasomotor neuroses. It has been described as a form of vasoconstrictor neurosis of the extremities, also acroparesthesia of Schultze. The disorder expresses itself in the form of pains and paresthesia of the extremities. The hands are more frequently involved than the feet. Cassirer found that women and girls were more frequently affected than males. In females the condition occurs from puberty until the menopause, although children and older people are not spared. Curschmann's youngest patient was a girl, aged 10 years, his oldest a woman of 73. Stoeltzner described the disorder in a child, aged 2 years; Lewandowsky, in a girl, aged 7 years. Both Curschmann and Oppenheim recognize a hereditary factor in the occurrence of acroparesthesia. Diehl describes a family in which angiospastic conditions affected several generations.

The disease comes on mostly in paroxysmal attacks, which manifest themselves either during the night or toward morning. There may be creeping or prickling sensations in the skin. The pains may occur in the hands and the feet at the same time. Sometimes the attacks are not symmetrical, occurring with

greater severity in one extremity than in the other. In a certain group of cases, pain is associated with an icy coldness and weakness of the extremities.

The treatment recommended consists in the avoidance of alcohol and nicotine as well as moderation in physical and mental effort. Sex relations in adults and masturbation in children are thought to be etiologic factors and should be controlled. Hydrotherapeutic measures, particularly hot baths, are recommended.

Medical Education, Registration and Hospital Service

COMING EXAMINATIONS

ALABAMA: Montgomery, July 9-12. Chairman, Dr. J. N. Baker, 519 Dexter Avenue, Montgomery.

AMERICAN BOARD OF OPHTHALMIC EXAMINERS: Portland, Ore., July 8, and Philadelphia, Oct. 21. Sec., Dr. William H. Wilder, 122 South Michigan Avenue, Chicago.

AMERICAN BOARD OF OTOLARYNGOLOGY: Portland, Ore., July 8, 1929. Sec., Dr. W. P. Wherry, 1500 Medical Arts Building, Omaha, Neb.

CALIFORNIA: Los Angeles, July 8-11, and San Francisco, July 15-18. Sec., Dr. Charles B. Pinkham, 420 State Office Bldg., Sacramento, Calif.

DISTRICT OF COLUMBIA: Washington, July 8, 1929. Health Officer, W. C. Fowler, Franklin School Building, 13th and K. Streets, N.W., Washington, D. C.

HAWAII: Honolulu, July 8, 1929. Sec., Dr. James A. Morgan, Room 48, Young Building, Honolulu, Hawaii.

MASSACHUSETTS: Boston, July 9-11, 1929. Secretary, Dr. Frank M. Vaughan, 144 State House, Boston.

PENNSYLVANIA: Philadelphia and Pittsburgh, July 9-13, 1929. Dir., Mr. C. D. Koch, Harrisburg, Pa.

SOUTH DAKOTA: Rapid City, July 16, 1929. Dir., Dr. H. R. Kenaston, Bonesteel, S. D.

WASHINGTON-BASIC SCIENCE: Seattle, July 11-12, 1929. Dir., Mr. Charles Maybury, Olympia, Wash.

WASHINGTON: Seattle, July 15-17, 1929. Dir., Mr. Charles Maybury, Olympia, Wash.

Connecticut March Examination

Dr. Robert L. Rowley, secretary of the Connecticut Medical Examining Board, reports the written examination held at Hartford, March 12-13, 1929. The examination covered seven subjects and included 70 questions. An average of 75 per cent was required to pass. Twenty-one candidates were examined, all of whom passed. Three candidates were licensed by endorsement of their credentials. The following colleges were represented:

College	PASSED	Year Grad.	Per Cent
Yale University School of Medicine	(1928)	75, 78.1, 82.5, 83.5, 84.4	
Georgetown University School of Medicine	(1928)	76.5, 77.7, 82.8	
Rush Medical College	(1929)		87.3
Johns Hopkins University School of Med.	(1924)	86.6, (1925)	82.9
Boston University School of Medicine	(1927)		85.1
Tufts College Medical School	(1928)		78.4
Columbia University College of Phys. and Surgs	(1928)		77.1
University of Pennsylvania School of Medicine	(1926)		84.5
University of Vermont College of Medicine	(1928)		81.5
University of Virginia Department of Medicine	(1927)		80.7
University of Manitoba Faculty of Medicine	(1920)		80.7
University of Toronto Faculty of Medicine	(1926)		83.2
McGill University Faculty of Medicine	(1927)		78.4
University of Paris	(1927)		76.7

College	ENDORSEMENT OF CREDENTIALS	Year Grad.	Endorsement with
Johns Hopkins University School of Medicine	(1923)		Maryland
Columbia University College of Phys. and Surgs	(1925)		New Jersey
University of Naples	(1923)		New York

Illinois April Examination

Mr. V. C. Michels, superintendent of registration and education, reports the written and practical examination held at Chicago, April 9-12, 1929. The examination covered ten subjects and included 100 questions. An average of 75 per cent was required to pass. Seventy-four candidates were examined, 67 of whom passed and 7 failed. Eighteen candidates were licensed by reciprocity and five by endorsement of credentials. The following colleges were represented:

College	PASSED	Year Grad.	Per Cent
Chicago Medical School	(1929)	78,* 79.8, 82.4, 85	
Loyola University School of Medicine	(1929)	*75, 75.6, 75.7, 76, 77.3, 78.7, 78.8, 79, 79, 80, 80, 81, 81, 81, 81.3, 81.3, 82, 83	
Northwestern University Medical School	(1928)	81, 84.6, 84.8	
Rush Medical College	(1927)	80.5, (1928) 79, (1929) 77, 77.8, 78.4, 78.7, 79.5, 79.8, 80, 80.2, 80.5, 81.3, 81.4, 81.4, 81.8, 82, 82, 82.4, 82.6, 82.7, 83, 83.3, 83.5, 83.6, 84, 84, 84, 84, 84, 84.2, 84.4, 84.4, 85.4, 85.8, 86.3	
University of Illinois Coll. of Med.	(1928)	76.5, 84.5, (1929)	82*
Washington University School of Medicine	(1927)		80
University of Buffalo School of Medicine	(1924)		83
University of Manitoba Faculty of Medicine	(1928)		80
University of Kharkov, Russia	(1916)		75.6

FAILED

Chicago Medical School	(1929)*	71
University of Copenhagen, Denmark	(1922)	73
University of Königsberg, Germany	(1927)	71
School of Medicine and Pharmacy of Jalisco, Guadalajara, Mexico	(1925)	71
Dragomanov Institute, Russia	(1917)†	51
University of Kharkov, Russia	(1921)†	66
University of Odessa, Russia	(1922)†	63

College	LICENSED BY RECIPROCITY	Year Grad.	Reciprocity with
College of Medical Evangelists	(1923)		California
University of Illinois Coll. of Med.	(1901) N. Dakota, (1928)		California
University of Michigan Medical School	(1924), (1927)		Michigan
St. Louis University School of Medicine	(1925, 2)		Missouri
Washington University School of Medicine	(1927)		Missouri
University of Nebraska College of Medicine	(1927)		Nebraska
Jefferson Medical College of Philadelphia	(1917)		Penna.
University of Pennsylvania School of Medicine	(1925)		Missouri
Meharry Medical College	(1912), (1917) Tennessee, (1921)		Virginia
Vanderbilt Univ. School of Med.	(1906) Missouri, (1925)		Tennessee
University of Tennessee College of Medicine	(1917)		Tennessee
Milwaukee Medical College, Milwaukee	(1903)		Iowa

College	ENDORSEMENT OF CREDENTIALS	Year Grad.	Endorsement with
Boston University School of Medicine	(1915)		U. S. Army
Indiana University School of Medicine	(1923), (1927)		U. S. Navy
Rush Medical College	(1928)		N. B. M. Ex.
University of Michigan Medical School	(1926)		N. B. M. Ex.

* These candidates have completed their medical courses and will receive their M.D. degrees on completion of one year's internship in a hospital.

† Verification of graduation in process.

Maine March Examination

Dr. Adam P. Leighton, Jr., secretary, board of medical examiners, reports the written and oral examination held at Portland, March 12-13, 1929. The examination covered ten subjects and included 100 questions. An average of 75 per cent was required to pass. Six candidates were examined, five of whom passed and one failed. Three candidates were licensed by reciprocity. The following colleges were represented:

College	PASSED	Year Grad.	Per Cent
Georgetown University School of Medicine	(1895)		*
Boston University School of Medicine	(1928)		81
Harvard University Medical School	(1909)		77.5
Tufts College Medical School, Boston	(1928)		86
University of Vermont College of Medicine	(1928)		82.5

FAILED

University of Naples, Italy	(1927)	50

College	LICENSED BY RECIPROCITY	Year Grad.	Reciprocity with
Johns Hopkins University School of Medicine	(1917)		Maryland
Columbia University College of Phys. and Surgs	(1914)		Iowa

* Passed oral examination, and granted credit for years of practice.

Ohio April Examination

Dr. H. M. Platter, secretary, state medical board, reports that thirteen candidates were licensed by reciprocity and two by endorsement of credentials on April 2, 1929, at Columbus. The following colleges were represented:

College	LICENSED BY RECIPROCITY	Year Grad.	Reciprocity with
Howard University School of Medicine	(1925)		Virginia
Indiana University School of Medicine	(1925)		Indiana
State University of Iowa College of Medicine	(1921)		Iowa
Hospital College of Medicine, Medical Department Central University of Kentucky	(1907)		Kentucky
University of Louisville School of Medicine	(1921)		Kentucky
Tulane University of Louisiana School of Medicine	(1910)		Louisiana
Johns Hopkins University School of Medicine	(1926)		Penna.
University of Michigan Medical School	(1925)		Michigan
University of Buffalo School of Medicine	(1925)		New York
University of Pittsburgh School of Medicine	(1905)		Penna.
Medical College of the State of South Carolina	(1914)		S. Carolina
Meharry Medical College	(1927)		Louisiana
McGill University Faculty of Medicine	(1924)		Maine

College	ENDORSEMENT OF CREDENTIALS	Year Grad.	Endorsement with
Yale University School of Medicine	(1924)		N. B. M. Ex.
McGill University Faculty of Medicine	(1926)		N. B. M. Ex.

Book Notices

RECENT ADVANCES IN PSYCHIATRY. By Henry Devine, O.B.E., M.D., B.S., Medical Superintendent Holloway Sanatorium, Virginia Water. Cloth. Price, $3.50. Pp. 340. Philadelphia: P. Blakiston's Son & Company, 1929.

Regardless of the minor errors that must necessarily creep into a work of such optimistic scope as the titles of these volumes imply, they cannot be praised too highly. Here for the first time is an attempt at summarization of what has proved the best of the tremendous literature in the specialties of neurology and psychiatry and their allied fields. These works are not simply reprints of authors' summaries but are the resynthesis of a tremendous literature carefully sifted and the unessential discarded. Too much time is included in the "recent," and individual detail has been somewhat sacrificed. Nevertheless, these books are invaluable to the neuropsychiatrist and should certainly be continued yearly or biyearly.

ÜBER UMBAU UND ABBAU DER SPRACHE BEI GEISTESSTÖRUNG. Von Dr. F. G. Stockert, Assistenzarzt der Universitäts-Nervenklinik an der Universität Halle. Paper. Price, 7.80 marks. Pp. 82. Berlin: S. Karger, 1929.

This is a highly technical monograph concerned with the various speech disturbances associated with mental disorders. The subject matter is dealt with in a decidedly theoretical manner and the reader is bewildered by assumptions based on clinical descriptions alone. Henry Head's work is not mentioned once by the author. The book lacks an index and a table of contents. It may be of value to investigators in this special field of speech disorders.

ETHICS AND THE ART OF CONDUCT FOR NURSES. By Edward Francis Garesché, S.J., M.A., LL.B. Cloth. Price, $2.50. Pp. 341. Philadelphia: W. B. Saunders Company, 1929.

An excellent book on the ethics of nursing which holds that the art of conduct should spring from the fundamental ethical principles. "The school of nursing has the same responsibilities that any other school must bear. It is educating, not only nurses, but women who will have to live their lives as well as practice their profession. Indeed, they cannot be good nurses without being sterling women." Hence, in addition to telling how to act in given situations, the author brings out the general ethical principles on which nurses should be correctly informed. It is adapted for use as a textbook in any school of nursing.

DIE PATHOGENETISCHEN GRUNDLAGEN DER THYREOTOXIKOSETHERAPIE. Von Johan Holst. Paper. Pp. 176, with 45 illustrations. Oslo: Jacob Dybwad, 1928.

Holst uses the term primary thyrotoxicosis as synonymous with exophthalmic goiter. Secondary thyrotoxicosis is regarded as due to "toxic adenoma." This monograph deals with primary toxicosis and the principles of its treatment. It is based on thorough and comprehensive study of some 150 cases in the light of a good grasp of the present knowledge of the thyroid and its functions. The modern use of iodine in connection with thyroidectomy in the treatment of primary thyrotoxicosis is the central point of the discussion. It is of interest to note that by the middle of last century a well founded theory in regard to the relation of iodine to goiter was advanced by Chatin and others, who explained endemic goiter as due to the lack of iodine and advocated the use of iodine for the prevention of goiter. Unfortunately the amount of iodine used was excessive, bad results followed, and nothing further was done in the matter until fifty years or more later. Holst concludes that the treatment of primary thyrotoxicosis with iodine (Plummer's method) is warranted fully as a preoperative measure but not as an independent method of cure in all cases. This difficult question is discussed from many angles. In an effort to throw light on the nature of the action of iodine in thyrotoxicosis, the effects of iodine on the goiter itself and other basic problems are considered. Holst believes that there are two iodine combinations in the blood, an inorganic and an organic, and that the latter represents the active principle of the thyroid in the blood. He suggests that in some way not now explainable the giving of inorganic iodine arrests the rapid discharge into the blood of the thyroid secretion that seems to occur in thyrotoxicosis ("thyroid diarrhea"). The apparent relation between the inorganic iodine in the blood and the capacity of the thyroid to retain its secretion—"the intermediary iodine balance"—is presented in an instructive manner in its bearing on the treatment with iodine under various conditions of thyrotoxicosis. There are chapters also on the operative treatment, on aftercare and on the physiology and pathology of the thyroid remnants after subtotal thyroidectomy. The book will be of interest to all students of the thyroid. It helps one to understand exophthalmic goiter and to treat it rationally. But the fundamental problem of exophthalmic goiter remains unsolved.

HOSPITAL ADMINISTRATION: A CAREER. The Need of Trained Executives for a Billion Dollar Business, and How They May Be Trained. By Michael M. Davis, Ph.D. Paper. Pp. 97, with 3 illustrations. Chicago: The author, 1929.

This book fills the need for an intelligent introduction to the field of hospital administration, with especial reference to the training and the procuring of hospital superintendents and other executives. The opening chapter gives a brief review of the expanding field of hospital administration. Following in logical sequence are chapters on the administrative and the professional functions in hospitals; comparisons of physicians, nurses and laymen as superintendents; present methods of training and obtaining hospital administrators; how hospital jobs are filled and found; the educational elements in hospital administration; principles underlying the courses of training; suggestions on subject matter, and review of efforts to establish training schools. Valuable suggestions are offered regarding the establishment of courses for the training of hospital executives.

LEHRBUCH DER KINDERKRANKHEITEN. Von Dr. Heinrich Lehndorff, Privatdozent für Kinderheilkunde an der Universität Wien. Third edition. Paper. Price, 10.80 marks. Pp. 329. Vienna: Julius Springer, 1928.

This is an excellent textbook on the diseases of children. The author has attempted to present the subject matter concisely but also has managed to incorporate the important recent advances in pediatric investigation. The book is essentially a condensed practical text for students and general practitioners and is in no sense a reference book. There are no illustrations. Three sizes of type are used in discussing a subject: small for relatively unimportant phases, much larger letters and double spacing for especially emphatic phases, and average type for those of average importance, which enables the student to ascertain readily the salient points. Diagnosis and treatment are especially emphasized, and drugs and their doses are frequently mentioned. At the beginning of every chapter, for two or three pages, are diagnostic observations regarding each group of organs; this feature is of distinct aid. Certain differences from American pediatric textbooks may be noted: Influenza is usually referred to as epidemic grippe, grippe being a much more popular term than influenza and apparently meaning the same symptom complex. Diseases of the blood are included under the general heading of general and constitutional disturbances along with the various diatheses and constitutional anomalies. Celiac disease, chronic gastro-intestinal catarrh, mucous colitis and obstipation are peculiarly classified and discussed under the section on nutrition and nutrional disturbances rather than under the section on diseases of the digestive organs. This is rather confusing. The brevity, clarity and yet completeness of the subject matter are the main features.

THE TOXEMIAS OF PREGNANCY. By H. J. Stander, Associate Professor of Obstetrics, Johns Hopkins University Medical School. Medicine Monographs, Volume XV. Cloth. Price, $3. Pp. 161. Baltimore: Williams & Wilkins Company, 1929.

In this volume is collected the important information concerning the etiology, pathology, classification, symptomatology and treatment of the toxemias of pregnancy. The author has reviewed the recent literature thoroughly and has included not only American but also British, French, German, Italian and other publications. There is nothing really new in the book, but this is not the author's fault. Eclampsia and the syndromes known as preeclampsia and hyperemesis remain "the diseases of theories," in spite of the enormous amount of energy expended in attempting to unravel the mysteries of the toxemias of pregnancy. The author emphasizes the chemical changes that occur during the toxemias of pregnancy, but unfortunately chemical analysis as yet has not provided enough useful infor-

mation. Like most authorities in this country, Stander favors the conservative treatment of the toxemias of pregnancy and quotes Plass's tables to show that radical treatment has almost twice the mortality of conservative therapy (21.7 and 11.1 per cent, respectively). In the author's clinic, if conservative therapy proves of no avail, radical intervention is practiced under spinal or local anesthesia. The latter point is most important, as previously proved experimentally by Stander. As the same tables show, Greenhill reported a mortality of only 7.7 per cent in De Lee's clinic, where the treatment is radical and where, almost always, direct infiltration anesthesia is employed in operations performed on patients who have toxemia. The book will prove interesting to all obstetricians, and the extensive bibliography should be helpful to those interested in the subject. The material is well arranged and the typography is excellent.

DISEASES OF THE LIVER, GALL-BLADDER AND BILE-DUCTS. By Sir Humphry Rolleston, K.C.B., M.D., Hon.D.Sc., Regius Professor of Physic in the University of Cambridge, and John William McNee, D.S.O., M.D., D.Sc., Associate Physician to University College Hospital. Third edition. Cloth. Price, 42/—. Pp. 884, with illustrations. London: Macmillan & Company, Ltd., 1929.

After a lapse of seventeen years, a new edition appears. It is the product of the experience of men who deservedly stand high in their profession and who are equipped for their task in physiology, pathology and clinical medicine. They reveal an intimate knowledge of the old and recent literature on the subject. There are adequate descriptions of the contributions of Mann of the Mayo Clinic, of the lessons drawn from liver extirpation, of the work of Graham and Cole, Whitaker and others on the function of the gallbladder as determined by the use of the dye tests, of the rôle of the reticulo-endothelial system in the production of bile, and of researches on cholesterol. Only such recent work as Boyden's on gallbladder contraction and Ivy's on cholecystikin are not mentioned. The authors appear to be rather lukewarm in their attitude toward gallbladder drainage with the duodenal tube. It is difficult to find any subject that is not presented in a scholarly manner, whether in the consideration of etiology, morbid anatomy or diagnosis. The van den Bergh test for liver function is the test of choice. The bromsulphalein test is not mentioned. Possibly less stress might have been laid on the subject of carcinoma of the biliary tracts and more on cholecystitis without gallstones. All in all, however, this book can be recommended as the best and most complete of its kind that has appeared in several years. The bibliography is extensive and the text is written in literary English.

DISEASES AND DEFORMITIES OF THE SPINE AND THORAX. By Arthur Steindler, M.D., F.A.C.S., Professor and Head of the Department of Orthopedic Surgery of Iowa State University Medical School. Cloth. Price, $12.50. Pp. 573, with 76 plates. St. Louis: C. V. Mosby Company, 1929.

This monograph was written by a man peculiarly qualified to write it. His knowledge of English, French, German and Italian orthopedic literature is unusually intimate and complete. The subject is of importance to every orthopedic surgeon. The presentation of the material is excellent, as is the sequence of the subject matter treated. Emphasis has been placed on the proper subjects. There is much originality in the book, which reflects the author's intensive study and research work on the conditions discussed. His choice of illustrations is excellent, and the execution is on the whole satisfactory. Numerous roentgenograms, line drawings and anatomic sketches should be of value to the reader. The subject of congenital deformities of the spine and thorax has been treated extensively, and the chapter on spondylolisthesis has been well done. In the chapter on scoliosis, the author has referred to almost every good article that has appeared in the literature. In addition, he offers the results of his own extensive research and intensive study. He includes the Galeazzi method of treatment of scoliosis. Fractures and dislocations are given a good-sized chapter. The chapter on low back pain is worthy of the attention of every orthopedic surgeon, gynecologist and industrial surgeon. Tuberculosis and osteomyelitis of the spine are discussed, as is syphilis, and there is a good chapter on chronic arthritis of the spine. Tumors of the spine are included in one chapter, and a synopsis of the anatomy of the spine in another. The author has been fortunate in having the advice and help of Dr. H. J. Prentiss concerning all anatomic questions. The work of the publisher is well done. The bibliography is comprehensive and well organized. This book should be of great value to the orthopedic surgeon, the pediatrician, the neurologist and the physical therapeutist.

SURGICAL PATHOLOGY. By Cecil P. G. Wakeley, F.R.C.S., F.R.S., Hunterian Professor, Royal College of Surgeons of England, and St. J. D. Buxton, M.B., B.S., F.R.C.S., Junior Surgeon and Junior Orthopædic Surgeon, King's College Hospital. Cloth. Price, $12.50. Pp. 904, with 392 illustrations. New York: William Wood & Company, 1929.

This textbook, written primarily for undergraduates and recent graduates interested in surgery, presents the pathologic changes of surgical conditions. An attempt is made to trace each surgical disease from its inception, and all the possible changes and complications are considered. In discussing the pathogenesis of many conditions, the authors give prominence only to one or at most a few of the accepted theories. New or previously favored ideas are either only mentioned or not even accorded that privilege. Part of the book is devoted to general pathology, including the subjects of infection, immunity, inflammation, wounds, gangrene and tumors. By far the greater part deals with special pathology. On account of the immensity of the subject which the authors have tried to cover in a limited space, brevity and conciseness, sometimes excessive, are noticed throughout. The book is amply illustrated. Many excellent drawings, some of them beautifully colored, as well as photographs and reproductions of roentgenograms depicting the various points described in the text, are provided. The book is written clearly and is easily read. Lack of references is noticeable. However, the book serves its purpose well and can be recommended to those for whom it is intended.

Miscellany

A SUMMER CAMP FOR DIABETIC CHILDREN *

ALFRED E. FISCHER, M.D.
NEW YORK
AND
ELEANOR V. GREEN, M.A.
FLUSHING, N. Y.

Joslin[1] has emphasized repeatedly the fact that diabetic children have become permanent members of our communities. If, in addition, they are to become useful, they must be cared for in every way as are other children of the same age.

With the growth of the children's diabetic clinic at Mount Sinai Hospital to twenty active cases, we hoped that we could provide a summer vacation for them as we do for other children in the outpatient department. They were barred from fresh air homes and other summer camps because of the difficulties that might arise in their daily regimen. The only way, therefore, to provide a summer vacation for them was to establish a separate camp for diabetic children.

The hospital social service department aided us in securing funds, and a farm 70 miles from New York was selected. So far as possible, the families of the children helped defray the expenses. The total cost was about $25 a week per child, including rent, and the salary of a dietitian, etc.

A start was made with five children in charge of one of us (E. V. G.). Two additional children were sent after the camp had been in successful operation for two weeks. All cases were from the outpatient department. The second floor of the farm house was used for sleeping quarters and, in addition, a room was equipped as a laboratory for urinalysis and the sterilizing of insulin syringes.

The camp consisted of two boys, aged 12 years, and five girls, aged 15, 14, 12, 9 and 8 years, respectively. All children on

* From the departments of pediatrics and dietetics, Mount Sinai Hospital.

1. Joslin, E. P., and White, Priscilla: Diabetic Children, J. A. M. A. 92: 143 (Jan. 12) 1929.

arrival were placed on the same calculated diet and insulin dosage that they had had at home. The daily routine was as follows:

7:30	a. m.:	Setting up exercises.
8:30	a. m.:	Breakfast.
9 -12	a. m.:	Outdoor recreation.
12:30- 1	p. m.:	Lunch.
1 - 3	p. m.:	Rest.
3 - 4:30	p. m.:	Swimming and bathing.
6 - 6:30	p. m.:	Supper.
6:30- 8	p. m.:	Lawn games.
9	p. m.:	Bed.

The schedule was, of course, elastic, and particular care was taken not to expose any child to the sun for more than a short period daily until each was acclimated. The children were under constant personal supervision. Lumps of sugar were always carried to prevent hypoglycemic manifestations.

As far as possible all children ate the same foods. The average daily cost of food per child was 65 cents. Dairy products and fresh vegetables were procured from neighboring farms. Expensive canned vegetables, cream and other high priced foods were for the most part eliminated. After a few days the appetites of the children increased perceptibly and larger quantities of vegetables low in carbohydrate content were added to satisfy the increased appetite. All food was prepared in bulk and each child weighed his own portion from scales that were provided. A qualitative urinalysis was done four times a day by each child: on arising, before lunch, before supper and before retiring. The results were recorded on a large chart. By this method an accurate record of the daily efficiency of the treatment was available. No determinations of blood sugar were made. Insulin was measured and administered by each child to himself except in the case of the youngest child who, while old enough to give herself insulin, had an extreme myopia and was not able to read the graduations on a syringe accurately. The supervising dietitian was present when the injections were given, and errors in technic which might have been present at home were corrected. Each child had his own insulin outfit and was required to keep it properly and to sterilize it before use.

A report was sent by mail every second or third day to the physician in charge (A. E. F.). All changes in diet and insulin dosage were made by him. When obvious insulin overdosage occurred, the dietitian reduced the number of units immediately. In case of emergency, the physician was telephoned. The calls resulted in practically every instance from some symptom of insulin shock such as vertigo or diplopia. Later these conditions were more readily recognized and promptly treated.

Comparison of Children's Progress During Stay in Country

Case	Age	Weight, Kg.		Sitting Height, Cm.		Standing Height, Cm.		Diet						Insulin Units	
								Before			After				
		Before	After	Before	After	Before	After	C.	P.	F.	C.	P.	F.	Before	After
1	12	33.2	33.4	74.5	75.5	141.5	142.5	130	55	100	135	55	120	25	20
2	12	33.9	31.3	74	74.5	143	143.5	90	55	125	105	60	140	30	30
3	12	39.3	41.5	77	77	152	152	75	50	120	95	60	125	0	0
4	15	34	36.8	77	77	150	150	130	60	100	145	60	110	25	25
5	14	45.9	45.9	78	78.5	147	148	135	60	105	135	60	105	75	55
6	9	27.9	28.8	67	67	127	128	105	55	100	110	60	100	18	18
7	8	27.2	26.8	65	65	127	128	110	60	110	110	60	110	13	17

COMMENT

A period of six weeks is far too short a time in which to evaluate progress in a chronic disease such as diabetes. One would expect that the more recent cases would have responded most favorably to a regimen of country life and outdoor exercise, as they frequently do immediately after hospitalization. This was particularly true in patient 4, who gained 6 pounds (3 Kg.) in six weeks at camp. Gains in height varying from 0.5 to 1 cm. were also recorded in each child. Patient 3 had a mild diabetes and was not receiving insulin. She had a slight glycosuria when sent to camp which cleared up rapidly. She gained 2 pounds (1 Kg.) during the six weeks. In patient 5, with diabetes of five years' duration, the insulin dosage was reduced from 75 to 55 units daily and the number of injections from four to three daily. In her normal environment we had been unable to keep this child aglycosuric without a fourth injection of insulin at 11 p. m. We are certain that the increased tolerance was real and not due to a stricter regimen, for we had had the child under close observation on numerous previous occasions. Seven months after her return from camp, she was able to continue the same diet with the reduced amount of insulin and number of injections, without glycosuria. Her diet has not been changed in the past year.

The accompanying table compares the children's progress during their stay in the country from July 4 to Aug. 20, 1928. The appearance of the children that did not gain in weight was nevertheless greatly changed for the better. Their turgor and general well being improved markedly. There were no infections or accidents during the summer. All insulin shocks were mild and readily controlled. One boy (patient 1) usually fell asleep during his hypoglycemic seizures and recovered from them spontaneously. If the children complained of hypoglycemic symptoms while awake, a small lump of sugar or a slice of orange always sufficed to arrest the symptoms.

In the organization of this work, it was felt that a dietitian well versed in calculating diabetic diets would be preferable to a trained nurse without especial diabetic training. There proved to be no need for a nurse, although one was at hand. The physician visited the camp only once during the summer, and then merely to acquaint himself with the actual daily life at the farm.

The experiment was undertaken as a preliminary attempt toward placing diabetic children in larger camps. The ease with which they were cared for perhaps indicates that they could be readily included as a group under a regular camp nurse or dietitian.

The camp was surely beneficial to the children. It made possible regular dietary supervision, insulin administration, activity and rest for a period of six weeks. A truer insight into each child's diabetic state was reached. Fully as important was the relief from care that was afforded in the home from which the child came. The burden of the nutrition and education of a diabetic child is often cast on one member of a family, usually the mother, who has numerous other duties. To release her for a portion of each year from a duty that will be continually hers seems obligatory, especially in the poorer homes in which most of these children live.

CONCLUSIONS

1. A summer camp for diabetic children is a feasible project.
2. Such a camp was conducted for seven children during the summer of 1928 with benefit to each child and without accident.
3. The camp relieves the home of the burden of the care of the diabetic child and therefore has a double value.

27 West Seventy-Second Street—272 Lincoln Street.

Medicolegal

Death Under Anesthesia

(Eggert v. Dramburg et al. (Wis.), 221 N. W. 732)

The plaintiff's intestate went to the office of the defendants, dentists, to have teeth extracted. A "gas anesthetic" was administered and the teeth were removed, but the patient died in the defendants' office. According to the record, "a post-mortem examination disclosed that decedent died of heart failure which was caused by the excitement of the heart produced by the administration of the gas anesthetic." The defendants made no examination to ascertain the condition of the decedent's heart before they administered the anesthetic. They simply observed her physical condition and asked a few general questions as to her health. They observed nothing out of the ordinary, except that she was overweight. In the trial court, judgment was entered for the defendants, and the plaintiff appealed to the supreme court of Wisconsin.

The plaintiff's cause of action, said the supreme court, was based wholly on the claim that the defendants did not exercise the degree of care and skill required of dentists in order to discover whether the deceased had a bad heart, before they administered the anesthetic. There was nothing to arouse any suspicion, however, as to the physical condition of the decedent, except her overweight, and the defendants testified that overweight has no bearing on the question whether the gas anesthetic can be safely administered. The plaintiff offered no proof to meet this testimony, and it therefore stands as proved in this case. There was no evidence that would have sustained a finding that the defendants did not exercise the degree of care and skill exercised by dentists in good standing in their community. If they did not exercise that degree of care and skill, the plaintiff should have offered proof to establish that fact. The plaintiff did offer the testimony of one physician, that in a hospital with which he was connected the patient was always given a physical examination before an anesthetic was administered, whether teeth were to be extracted or some other operation performed, but no proof was offered to show that this was the usual and customary practice in dentists' offices in Milwaukee. The plaintiff's proof fell far short, therefore, of meeting the burden resting on him. The judgment in favor of the defendants was affirmed.

Delay in Responding to Call

(De Witt v. Schweitzer (Ohio), 163 N. E. 563)

Dr. De Witt sued Schweitzer for money claimed to be due for professional services. Schweitzer filed a cross-petition, alleging malpractice by Dr. De Witt. The trial resulted in a judgment for $1,000 against Dr. De Witt. This judgment was affirmed in the court of common pleas, and Dr. De Witt appealed to the court of appeals of Ohio, Stark County.

Schweitzer was injured by falling from a tree. Dr. De Witt was employed to treat him. The principal default charged against Dr. De Witt was that when he was informed by Mrs. Schweitzer over the telephone, several times during one night, that her husband was in intense pain and that they desired him to administer something to relieve it, a delay of perhaps eight or nine hours occurred before he arrived. Dr. De Witt had directed the administration of morphine in solution, but it was claimed that the patient could not retain this on his stomach and that the vomiting caused by it resulted in intense agony. This condition continued during the period while the patient was awaiting the arrival of Dr. De Witt and, it was claimed, resulted in a serious permanent nervous condition in Schweitzer. The court of appeals pointed out that the patient was suffering from severe physical injuries and that it was claimed only that the alleged malpractice of the physician produced further injuries. The trial judge, however, in charging the jury, used the word "injuries" or "injured" as many as fifteen times, sometimes referring to the injuries received in falling from the tree, sometimes referring to the injuries claimed to have followed the physician's alleged malpractice, and sometimes apparently referring to injuries of both classes. At the conclusion of the charge to the jury, the trial court was requested to correct the language by limiting the term "injury" to such injury as was received at the hands of the physician and so as to exclude injuries by falling from the tree. This, however, the trial court refused to do. The instruction given by the trial court was manifestly erroneous and prejudicial to the physician, as was apparent by the verdict. The judgment of the court below was reversed and the cause remanded.

A Glioma in Relation to Trauma

(Pfeiffer v. North Dakota Workmen's Compensation Bureau (N. D.), 221 N. W. 894)

A wrench which Pfeiffer was using in the course of his employment struck him in the left eye. He was dazed for some time. In about an hour his employer sent him to Dr. Spicer for treatment. Later he became blind, and it was discovered that his blindness was due to a glioma. Pfeiffer brought action against the North Dakota Workmen's Compensation Bureau. From a judgment in his favor the bureau appealed to the supreme court of North Dakota, which affirmed the judgment.

The sole issue before the court was whether Pfeiffer's blindness was caused by an injury received in the course of his employment. The workmen's compensation bureau claimed that the cause of the glioma and its effect were speculative, and that no connection had been shown between the blow and the blindness. Putting the case most strongly against Pfeiffer, the simple question of fact was whether the growth of the glioma was accelerated by the blow, although there was testimony to the effect that the blow itself might have caused the glioma. It is not necessary that testimony adduced be free from all speculation. When the injury complained of is shown to be a natural and probable result of a blow received, when it is shown that the accelerated growth of the glioma could be caused by the blow, when the nature of the ailment is shown to be such that the blow would affect and accelerate it, and when no other cause is shown, it is not speculative to arrive at the decision that the blow converted a dormant glioma into a malignant glioma and thus caused the blindness. In such a case the blindness is the proximate result of the injury received and thus comes within the protection of the statute. While there was testimony to the contrary as to the effect of a blow, all the expert witnesses agreed that the glioma caused the blindness, that it could have been dormant for a long time, that a blow of sufficient intensity could accelerate it, and that the change of sight previous to the blow must have been caused by something other than the glioma itself. The case presented a square conflict of testimony on material matters. It was not triable by a jury or triable de novo in the appellate court. The court could not say that the weight of the evidence was against the claimant, Pfeiffer. The trial court found in his favor. There was ample evidence to sustain that finding.

Industrial Umbilical Hernia and Workmen's Compensation

(Central Surety & Insurance Corporation et al. v. Industrial Commission of Colorado et al. (Colo.), 271 Pac. 617)

Fugitt, an employee of one of the plaintiffs in error, was helping to move a heavy cement mixer, October 27. At the moment of lifting, he did not notice that he had strained himself, but about an hour later his abdomen began to get sore. It got worse, and the next morning he consulted a physician, who advised a course of treatment. An examination showed a bulging, which an operation, November 2, disclosed as an umbilical hernia. The industrial commission awarded compensation under the workmen's compensation act, which award was confirmed by the district court. The employer and the insurance carrier thereupon carried the case to the supreme court of Colorado.

The workmen's compensation act of Colorado provides that:

> An employee, in order to be entitled to compensation for hernia, must clearly prove, first, that its appearance was accompanied by pain; second, that it was immediately preceded by some accidental strain suffered in the course of the employment.

The employer and the insurance carrier, plaintiffs in error, contended that there was no evidence that the appearance of

the hernia was accompanied by pain. But, said the court, as the hernia was "the protrusion of a part of the peritoneum through the umbilicus, and as such protrusion leaves a tenderness, and as Fugitt noticed soreness—pain—in his abdomen about an hour after the strain, the commission was justified in finding that the appearance of the hernia was accompanied by pain." The plaintiffs in error contended further that the hernia was not immediately preceded by some "accidental strain." But, said the court, if a strain is unforeseen, unexpected, and unintended, it is an accidental strain; it is not necessary that there be anything extraordinary occurring in or about the work itself, such as slipping, or falling, or being hit. The evidence in the present case clearly shows that there was an accidental strain, and the industrial commission was right in so holding. The court found, moreover, that this accidental strain "immediately preceded the hernia." The word "immediately" in law has different meanings, depending on the purpose sought to be accomplished. Various meanings have been given to it, among them, "within a reasonable time," and "as soon as may be." Giving the statutory provision a liberal, reasonable construction, the evidence was sufficient to support the finding of the industrial commission that the accidental strain immediately preceded the hernia. The judgment of the court below, confirming the award of the industrial commission, was affirmed.

Accident Insurance and Septicemia

(Continental Casualty Co. v. Willis (Va.), 28 Fed. (2d), 707)

The appellee, Willis, was the beneficiary under an accident policy issued to her sister, a trained nurse, by the appellant, the Continental Casualty Company. The insured contracted septicemia in the course of her work and died about three weeks later. In the U. S. district court for the eastern district of Virginia, the beneficiary obtained a judgment against the insurer. The insurer thereupon appealed to the circuit court of appeals, fourth circuit.

When the insured was first examined by physicians, an "abrasion or break" was found in the skin of her right index finger. It was admitted that the germs that caused the fatal illness entered through this abrasion. She had repeatedly used a disinfectant, the use of which was usual and proper and which ordinarily would not cause such an "abrasion or puncture," but which might produce such a result when improperly used or used by one whose skin was unusually tender or specially susceptible to cracking from its use. Evidence tended to show, however, that the break in the skin was caused by a puncture rather than by the use of the disinfectant. The trial judge instructed the jury that if there was a visible external injury through which the fatal germs were taken into the system, and if that injury occurred as the result either of the unintentional contact with some other object or from the use of some medicine or antiseptic solution which in the ordinary course of events in its careful use would not have caused the injury, then the jury would be justified in finding in favor of the beneficiary under the policy. Counsel for the insurer cited this charge as error and desired the trial court to instruct the jury that: "If insured washed her hands in lysol, intending to wash her hands in lysol, and doing everything and nothing more than she intended to do, there was no liability upon the defendant company, even though the result of such washing was unexpected." This instruction the trial court refused to give. The insurance provided by the policy in this case, said the appellate court, was against "personal bodily injury which is effected . . . by the happening of an external, violent and purely accidental *event*." The standard expression, the court pointed out, is "bodily injury effected by violent, external and accidental *means*." And, said the court, an "event" is the culmination or end that the "means" may have produced or brought about. The means may not have been in any way accidental, yet the event, because of some unknown and unknowable factor, highly accidental. The definition of the word "accident" stated by Webster, has received the approval of many courts: "An event which takes place without one's foresight or expectation; an event that proceeds from an unknown cause, or is the unusual effect of a known cause, and therefore not expected." This definition has been supplemented by the declaration of the U. S. supreme court that "an accidental event" is one ". . . 'happening by chance; unexpectedly taking place; not according to the usual course of things'; or not as expected." Whether the breaking of the skin of the finger of the deceased was caused by pricking it or by the unexpected and unusual result of the proper use of the disinfectant, in either case it was an accidental event and within the meaning of the words of the policy. But even if the terms "accidental event" and "accidental means" are not synonymous, the insurer would still be liable. Quoting from the leading case, *U. S. Mutual Acc. Assn.* v. *Barry*, 131 U. S. 100, 9 S. Ct. 755, 33 L. Ed. 60, the court points out that "if a result is such as follows from ordinary means, voluntarily employed, in a not unusual or unexpected way, it cannot be called a result effected by accidental means; but if, in the act which precedes the injury, something unforeseen, unexpected, unusual occurs, which produces the injury, then the injury has resulted through accidental means." The case, therefore, said the court, was properly submitted to the jury, and there was ample evidence on which to base the verdict. The judgment of the district court in favor of the beneficiary under the policy was affirmed.

Society Proceedings

COMING MEETINGS

American Medical Association, Portland, Ore., July 8-12. Dr. Olin West, 535 North Dearborn Street, Chicago, Secretary.

American Association for the Study of Allergy, Portland, Ore., July 8-9. Dr. Warren T. Vaughan, 118 E. Franklin St., Richmond, Va., Sec'y.

American Heart Association, Portland, Ore., July 9. Dr. Haven Emerson, 370 Seventh Avenue, New York, Secretary.

American Pharmacological Society, Boston, August 19-23. Dr. E. D. Brown, University of Minnesota Medical School, Minneapolis, Secretary.

American Physiological Society, Boston, August 19-21. Dr. W. J. Meek, University of Wisconsin Medical School, Madison, Secretary.

American Physiotherapy Association, Portland, Ore., July 8-9. Miss C. H. Ballard, St. Francis Hospital, San Francisco, Secretary.

American Radium Society, Portland, Ore., July 8-9. Dr. G. W. Grier, Jenkins Arcade Building, Pittsburgh, Secretary.

American Society for Experimental Pathology, Boston, August 19-23. Dr. Carl V. Weller, 1020 Ferdon Road, Ann Arbor, Mich., Secretary.

American Society of Biological Chemistry, Boston, August 19-23. Dr. D. W. Wilson, University of Pennsylvania Medical School, Philadelphia, Secretary.

American Society of Clinical Pathologists, Portland, Ore., July 5-8. Dr. H. J. Corper, National Jewish Hospital, Denver, Secretary.

Federation of American Societies for Experimental Biology, Boston, August 19-23. Dr. Carl V. Weller, 1020 Ferdon Road, Ann Arbor, Mich., Secretary.

Medical Women's National Association, Portland, Ore., July 7-9. Dr. Elizabeth Kittredge, 3906 McKinley Street, Washington, D. C., Sec'y.

Montana, Medical Association of, Great Falls, July 17-18. Dr. E. G. Balsam, Box 88, Billings, Secretary.

ASSOCIATION OF AMERICAN PHYSICIANS

Forty-Fourth Annual Meeting, held in Atlantic City, N. J., May 7-8, 1929

(Concluded from page 2191)

Gastric Secretions in Arthritis

DR. E. S. KILGORE, San Francisco: Several British authors have reported that there is achylia present in cases of arthritis. This would probably influence the flora and fauna of the alimentary canal and the organisms causing the arthritis. A series of arthritis cases were examined in this respect, especially those of infectious origin, by means of the alcohol or histamine test meal. No achylia was found and the test was repeated. We found that arthritis shows an increase of achylia in the age group between 40 and 60. Acute urethritis was often found in this group. Achylia is more marked where a specific etiology is present. We think that the achylia is evidence of the profound metabolic changes associated with specific disease.

The Clinical Syndrome of Hyperparathyroidism

DR. D. P. BARR, St. Louis: Experimental studies have shown that there is a parathyroid hormone; if the body is deprived of this a hypoparathyroidism results, which is evidenced by hypocalcemia and a high concentration of calcium in the urine. There is a state of muscular hypotension, and areas of calcification occur in the lungs, gastric mucosa and kidney tubules. These changes may also occur in nephritis, goiter, and sometimes even in normal individuals. Hypoparathyroidism

is often associated with osteomalacia and rickets, with fibrosis cystica, or with von Recklinghausen's disease. In this disease there is a very high incidence of parathyroid adenoma. This shows the relation between calcium metabolism and the parathyroids. If the parathyroid tumors are removed during life there is a remarkable change in the calcium metabolism. In some cases, when hyperplastic tissue of the parathyroids has been removed in von Recklinghausen's disease, the patients have shown considerable improvement.

Experimental Anemia

DR. G. H. WHIPPLE, Rochester, N. Y.: In our studies on experimental anemia in dogs, we have produced a continuous severe anemia of three or four years' duration. The anemia showed one third of normal blood supply. The diet was uniformly fixed. Study was particularly directed to the inorganic salt constituents of the diet. Organic elements are potent, but inorganic elements are of great importance. These experiments were difficult of control and depended on storage factors preceding diet periods. The blood regenerating effects of various foods were studied, and the ash of the foods which showed regenerative properties was studied in regard to its salts. The inorganic salt effects must be more or less indirect because not all of the salt passes into the hemoglobin, and only a small part of the iron can be incorporated in it. The action of inorganic salts must be exerted as catalysts. Iron seems to be the most prominent salt concerned. Copper is useful but its effect is often obscured by the iron. Some salts have an inhibitive effect. Some of the most potent foodstuffs for blood regeneration were found to be liver, chicken gizzard, peaches and apricots. These foods have a high iron content, as shown by the ash. In applying the results of these studies to clinical conditions it must be remembered that different types of anemia are due to entirely different factors. The anemia from infection is of a totally different nature to that produced by prolonged bleeding, and calls for different treatment.

Hyperparathyroidism: Tumor of Parathyroid

DR. R. M. WILDER, Rochester, Minn.: In a woman, aged 36, anemic, weak and nervous, the first symptoms occurred at 29, and were described as pains in the bones. She had had a tumor of the lower, right bicuspid tooth, which was diagnosed as myelosarcoma. She had also a tumor in the lower pole of the right parathyroid gland. Her weakness continued to increase, and she had to use crutches. The blood showed a low phosphorus content; calcium was slightly above normal. She had extensive decalcification of the bones. A diagnosis of osteomalacia was made. With cod liver oil, rest and careful diet the patient improved, and obtained a positive calcium balance, but she complained of pain in the condyle of the femur, where there was a cystic area. A small nodular mass in the parathyroid was removed. The patient at first showed symptoms of tetany, but later improved. In this case there was great loss of vitamin D, which was checked by vitamin D therapy.

Osteomalacia: Metabolism and Treatment

DRS. H. L. BLUMGART; S. L. CARGILL, and D. R. GILLIGAN, Boston: In our case there was no evidence of parathyroid disturbance; no elevation of blood calcium, and no evidence of nephrolithiasis. The calcium content was 100 mg. and the phosphorus 600 mg. The patient was accustomed to drinking boiled skim milk. She was treated with ultraviolet rays and given more calcium and phosphorus. The patient was followed for a year and her deformities markedly decreased; improvement has been maintained and the anemia has disappeared; she has no pain and the roentgen ray shows marked deposition of calcium. We feel from these results that osteomalacia of this type is due to vitamin D deficiency.

Tumors of the Hypothalamus, Causing Diabetes Insipidus

DR. T. B. FUTCHER, Baltimore: A man, aged 43, suffered from sweats, hemoptysis and polyuria. The symptoms were a mass on the left temporal region, pains in the back and thirst which was often intense. Roentgen examination showed a mass occupying the left lung. The sella turcica was normal. Treatment with posterior pituitary lobe was started with beneficial results, but later he went into coma and died. Autopsy showed carcinoma of the lung with metastases to the temporal bone. The pituitary gland was normal. The tumor was 3 cm. in diameter, extending from the infundibulum and involving the hypothalamus. This was the cause of the diabetes.

DISCUSSION

DR. HENRY JACKSON, Boston: A member of my family with diabetes insipidus had great thirst and persistent polyuria; the latter, however, was controlled by pituitary extract. The thirst was not. Vomiting also was a symptom. At the time of onset of the thirst, she had had spots of hemorrhage on the extremities. The question was whether these hemorrhages were associated with the pituitary trouble. It was shown later that there was complete destruction of the pituitary lobe, depending on hemorrhage into the posterior lobe. Death in this case was due to a widespread carcinoma of the abdomen, arising from the intestine but not associated with the pituitary gland.

Occurrence of the Agranulocytic Blood Picture in Infections Other Than Angina

DR. GEORGE BLUMER, New Haven, Conn.: I have seen four cases of this disease. One was in a man, aged 52, who complained of cough, expectoration, exhaustion, loss of weight, anorexia and fever. The man left the hospital against advice. Subsequently he returned to the surgical service. He had an abscess of the thigh which was opened. He suffered increasing leukopenia until death. The diagnosis was aleukemic leukopenia. At autopsy the bone marrow picture was not typical. As to the nature of the condition, I do not believe that agranulocytic angina is a disease. I think it is the reaction of the bone marrow to infection. The blood picture often appears before local infection appears. The infection may be a secondary affair. The condition may be confused with aleukemic leukemia or with aplastic anemia. In the latter condition the tremendous fall in red blood cells differentiates it; but there may also be borderline cases in these conditions.

DISCUSSION

DR. EMANUEL LIBMAN, New York: I have also encountered a hemorrhagic tendency in the Schultz type of case. It is important, but not always possible, to determine whether or not the throat condition is primary, because an already existing change in the blood may not give any symptoms. The multiple lesions of the throat at times do look different from those occurring in the course of an ordinary leukemia. The genital lesions are more characteristic of angina agranulocytica. At times the primary lesion is in the nasopharynx and may be overlooked until the lesion extends downward. It may be suspected if the uvula is edematous. I observed one case of primary nasopharyngeal involvement with recovery and then relapse with lesions of the throat and uvula, and a fatal issue. Like Dr. Blumer I have seen mild grades of the blood picture in a variety of infections. I am glad that he has again emphasized the rarity of aplastic anemia. Since 1915 I have preferred to speak of leukopenic anemia instead of aleukemic leukemia.

DR. E. P. CARTER, Baltimore: I have encountered agranulocytic angina in an individual in whom the granules fell below 2 per cent in a short time, but it was not associated with any anginal symptoms. In a short while the blood picture came back to normal with a rebound, and I had the extraordinary experience of seeing an instance of recovery from the agranulocytic condition. This condition had followed gangrene.

DR. GEORGE BLUMER, New Haven, Conn.: I have never seen such a case as Dr. Carter described. Dr. McAlpin in New York reported an individual who was perfectly well and was discovered to have agranulocytosis. The blood count was not extreme and the patient refused to pay any attention to it, as he said he did not suffer any inconvenience. Many of these patients, however, die within a few days or weeks. One case was reported in which roentgen therapy was used, and the patient recovered within two weeks. Perhaps this was an apparent recovery, and the patient suffered a relapse and died later. We have to be cautious about reporting cures. All authors agree that nothing has any effect in this condition, but I think it does no harm to try the x-rays.

Suprarenal Therapy

DRS. F. C. MCLEAN and A. E. KOEHLER, Chicago: In a patient with progressive muscular dystrophy, quite unable to work, when suprarenal treatment was started, the ergographic ability was shown to increase gradually and definitely. This patient had asthenia with hypotension, diminished oxygenization, negative nitrogen metabolism, and creatinuria. With treatment the protein and carbohydrate metabolism markedly improved.

Paroxysmal Hypertension, Associated with Suprarenal Tumor

DR. M. C. PINCOFFS, Baltimore: This lesion was seen in a young woman who had had frequent attacks of palpitation of the heart for ten years, increasing in frequency. The attacks were associated with heat and throbbing in the head, heat in the arms, difficulty in breathing, nausea, and coldness in the nose and knees. If she could vomit it helped her. In severe attacks she turned blue. She had no attacks after going to bed. The habits and nutrition of the patient were normal. The heart was normal. The blood pressure was usually 120 systolic and 80 diastolic, but during the attacks it went suddenly to 260 systolic. The pulse rate ranged from 90 to 110. During the attack the patient reclined without speaking. The forcible beating of the heart was very perceptible. The urine showed albumin and there was an intermittent glycosuria. The electrocardiogram during an attack showed high T waves as in hyperthyroidism. All the symptoms pointed to an epinephrine effect and we made a diagnosis of suprarenal tumor.

At operation, the suprarenal was found normal on the left side. On the right kidney there was a mass near the vena cava which, on account of its proximity to the vein, was difficult to remove. It was, however, finally dissected out, and found to weigh 150 Gm. The patient suffered considerable shock, but rallied. She never had another attack of palpitation. The tumor was of the paraganglionic type, and probably contained epinephrine in considerable amounts. These tumors are interesting as regards diagnosis for curative therapy. This suggests that epinephrinemia in man may have a relation to arterial hypertension.

DISCUSSION

DR. J. C. AUB, Boston: Dr. Bowe tried to find the active principle of the suprarenal cortex. We thought that if we were dealing with an active principle we ought to get results in animals which had had the suprarenals removed, but we were never able to get an extract which had this effect. We could not keep them alive or correct the muscular asthenia after removal of the suprarenal. The methods presented in these papers suggest that the suprarenal cortex was involved; if so, this is a very important piece of work.

DR. D. P. BARR, St. Louis: I had an experience with some of this work recently. The patient was a white American woman, aged 36, with myasthenia gravis. She was very weak and generally incapacitated. The creatinine output was 500 mg. before the extract was started. After the extract had been given four times daily, the creatinine excretion fell to normal. The clinical change was striking. She was free from a feeling of stimulation and could sleep restfully at night. She enjoyed walking about the hospital. Later she could walk a mile without resting, and has maintained progressive improvement. Her friends hardly recognize her for the same woman. In another woman, aged 21, with generalized muscular atrophy, and a very high creatinine output, the suprarenal therapy caused marked relief of the feeling of stimulation which had prevented her sleeping, and she was able for the first time in years to have a comfortable night's sleep. So far there has been no other marked change, but her outlook has improved. The third patient is of the type Dr. Koehler mentioned, with a low metabolic rate. She has not had very much of the extract as yet, but already she sleeps well and is relieved of the fatigue.

DR. R. M. WILDER, Chicago: The case Dr. Koehler referred to as having been treated in Rochester is difficult of diagnosis. We thought it was a case of myasthenia gravis, but a biopsy was done and later slides were made and shown to the neuropathologists. In their opinion the condition looked like progressive muscular dystrophy. The clearness of the fibers and the inconspicuousness of the cross striations, characteristic of dystrophy, were absent. This patient was given the Koehler extract, and the results were remarkable. The daily creatine and creatinine output had been quite high, ranging from 350 to 500 mg. Administration of the extract stopped the creatinuria. Parallel with this was a marked gain in strength. The patient was able to walk 3 miles before the end of a week, whereas before he could not walk 1 mile, and could not read more than five minutes, because of eye fatigue. In another patient, a young woman, the lesions were limited to the head. She had difficulty in speech. She tired after counting to 10. After receiving the extract she could count to 100.

DR. L. G. ROWNTREE, Rochester, Minn.: In regard to Dr. Pincoffs' case, the preoperative and postoperative courses were identical in every way with those in our patient, who also showed collapse. Our patient also got well. Study of these cases suggests that cases of hypotension might also be treated. Another set of factors enters into cases of Addison's disease.

DR. T. B. FUTCHER, Baltimore: A psychic patient, a typical neurasthenic, presented bradycardia; low blood pressure, and low metabolic rate. Without having any suggestions made to him, he was given this extract and at once began to experience very much less muscular and mental fatigability. He was better in every way.

Diseases of the Peripheral Vessels, Associated with Polycythemia Vera

DRS. H. Z. GIFFIN and G. E. BROWN, Rochester, Minn.: We studied 101 cases of polycythemia. The chief complaint was of symptoms related to the extremities. We made some physiologic studies and found that the physiology was very much disturbed. There were hypoglycemia and hypercalcemia, with a high percentage of calcification in the vessels. We tried to reduce the blood volume by means of phenyl hydrazene but with varied success. The types of disturbances studied were: (1) arteriosclerotic disease, among which there were six cases of claudication without occlusion; one case of arterial occlusion with gangrene, and thirteen cases of acroparesthesias; (2) thrombo-angiitis obliterans, five cases; (3) a large group with vasomotor disturbances. The volume flow of blood to the extremities was measured by calorimeter tests. We found that heat elimination is tremendously increased, and there was true vasodilatation. In one case there was unilateral vasomotor disturbance. In this case decrease of the blood volume reduced the symptoms. This also had some effect in relieving symptoms in claudication. A high percentage of the cases showed symptoms relative to the peripheral arteries. Arteriosclerotic disease was marked in all cases. In the erythromelalgic group, the studies were not uniform. These cases seemed somewhat atypical. In the paresthesias it was questionable whether reduction of blood volume caused any improvement.

DISCUSSION

DR. B. S. OPPENHEIMER, New York: In our series we have seen occlusions in various parts of the body. We excluded all the patients with essential hypertension. We had one case of cerebral thrombosis simulating brain tumor. In one man, aged 38, with polycythemia, there was a coronary occlusion with symptoms of angina pectoris. In a girl of 19 there was ascites with moderate enlargement of the liver and spleen. She was supposed to have occlusion of the hepatic veins. This was found at autopsy. Another patient had thrombosis of the saphenous vein. We had four cases similar to those of the authors with disturbance of sensation in the lower extremities. Three of our patients had an erythromelalgic syndrome. As to treatment with phenyl hydrazene, we had a woman whose blood platelets rose to one and a half million without thrombosis, but we stopped the phenyl hydrazene.

DR. G. E. BROWN, Rochester, Minn.: We have followed the platelet count, but we have not had any figure as high as that mentioned by Dr. Oppenheimer; 600,000 was the highest platelet count we had. We have observed venous thrombosis as a common complication of phenyl hydrazene therapy, and we found that the high platelet count was an important factor in this thrombosis.

Presentation of the Kober Medal

DR. GEORGE KOBER, Washington, D. C.: Complying with the courteous request of the president, I take pleasure in announcing that the association medal this year is awarded to one of the younger exponents of medical science; in fact, to the class to which the late Dr. Meltzer affectionately referred as "the Young Turks," meaning thereby to signify his appreciation of their progressive activities.

The recipient of the medal this year comes from an old medical family. His great-grandfather, James Jackson, was the first physician of the Massachusetts General Hospital. His father, James Jackson Minot, at a later period was visiting physician to the same hospital. Dr. Minot inherits a reputation which he has striven earnestly to maintain. He was gifted with great intellectual qualities and inherited the high ideals of a father who knew how to select the best schools and also how to interest him in the problems of medicine. From the very beginning of his medical studies he displayed the thoroughness, devotion and zeal which are essential for a successful medical career. He early acquired a thirst for knowledge and as a result received the personal interest and encouragement of his teachers, among whom were such men as James Homer Wright, the pathologist, and Channing Frothingham. With the latter he pursued studies on the normal temperature in rabbits, which were published in the *American Journal of Physiology* in 1912, the year of his graduation.

During his student years, and as house physician, he fell under the influence of such men as Edsall, Vickary, Lord and Locke, and imbibed much of their wisdom of the sick room.

In December, 1913, he went to Baltimore, where he came under the influence of Dr. William S. Thayer. Here he became assistant resident physician and teacher in medicine, and during the last year enjoyed a scholarship in research work in the physiologic laboratory of Dr. W. H. Howell. On his return to Boston, acting on the principle that "he who teaches learns," he became assistant in chemistry to Prof. L. J. Henderson. All of this work was splendid scientific and clinical preparation. At this time he became engaged in teaching medical classes at Harvard, and his fame as teacher and research worker secured for him rapid promotion, so that in 1928 he was appointed full professor of medicine, filling the vacancy caused by the death of Dr. F. W. Peabody. Dr. Minot was blessed not only with teachers capable of inspiring ambitious young men but also with enthusiastic co-workers and friends such as Roger I. Lee, F. W. Peabody and J. H. Means, who inspired one another.

His brilliant work in pernicious anemia was not a matter of chance and good luck but the result of painstaking research in diseases of the blood. He devoted many years and excellent work to this subject. He wrote seventy-five contributions, of which 90 per cent dealt with this important class of diseases. Other contributions dealt with the toxicology of industrial poisons, which subject was then of great interest and importance in the manufacture of ammunition and war material. After the discovery of insulin the effective treatment of pernicious anemia constituted the most important advance in medicine, particularly in the treatment of diseases which have heretofore baffled remedial efforts. These two important discoveries seem destined to alleviate human suffering. In diabetes mellitus research has shown that the pancreas elaborates an antidiabetic hormone, the extraction of which was solved by Banting. Considerable research has been expended on pernicious anemia, but no one suspected that the cure of the disease lay in the liver. It is true that Whipple and Robscheit-Robbins, in May, 1925, had called attention to the fact that a diet of liver, heart and skeletal muscles played an important rôle in the regeneration of the blood in chronic experimental anemia. Whipple also stated that even in complex forms of anemias—human pernicious anemia, anemia with nephritis and cancer cachexia—food factors deserve serious consideration in the treatment of the blood condition. As a result of these and other considerations, Minot instituted an intensive liver diet in all forms of anemia and found that the effects of this diet were more rapid and certain in pernicious anemia than in all other forms of anemia. He naturally reached the conclusion that the liver contains an active principle, quite as specific in its effects as are many of the known vitamins. This observation has been confirmed by Dr. Pope, who has isolated such a body in almost pure form.

While there remain some problems in the etiology and pathology of pernicious anemia, the results of the Minot-Murphy special liver diet, and later of the Cohn-Minot liver extract, have not been equaled by any other treatment. It is a matter of satisfaction that both of these valuable discoveries were made on American soil and that this association was the first to recognize the importance of Dr. Minot's work in May, 1928. The degree of D.Sc. was bestowed on him by his alma mater in the fall of 1928; he was selected for the Thayer lectureship, and quite recently he was awarded the Charles Mickla Fellowship of the University of Toronto. I take great pleasure in presenting the association medal to Dr. Minot, and as our congratulations go out to him, there follows the hope that his years of usefulness in the cause of humanity may still be many.

DR. GEORGE R. MINOT, Boston: I appreciate very much the honor conferred on me. It will serve as an added stimulus to my efforts to help younger men advance medical art and science. I consider that the honor conferred on me reflects on many persons who have helped and taught me in various ways, especially the late Dr. J. Homer Wright and Dr. Roger I. Lee, and my former chiefs, Drs. Edsall, Thayer and Howell; men who have taught me how science provides the means by which human suffering may be alleviated and who have aided me to understand fundamental knowledge and clinical problems.

When observations concerning the treatment of pernicious anemia with the feeding of liver were in the embryonic stage, Dr. William P. Murphy joined in the work and it is he who made it possible to complete adequate studies on patients. After we had learned about the effect of feeding liver, Dr. Edwin J. Cohn of Harvard University Medical School took up the study of the nature of the effective substance. This work is being continued and we have had the opportunity to test out the various fractions of liver which he has isolated. Many individuals have given us assistance in the work. The cooperation of Drs. J. F. Means, Wyman Richardson, Henry L. Christian and William B. Castle, at various hospitals in Boston, has enabled us to study many cases and thus permitted the work to progress relatively rapidly. Thirteen clinics in this country, one in Canada, and one in England assisted in testing out liver extracts, so that a reliable preparation could be made available for public use. We are greatly indebted to them for their careful work.

There is only one essential factor in the successful treatment of pernicious anemia, namely, that the physician be sure that the patient receives a potent preparation and obtains, indefinitely, enough of it each week. Satisfactory results depend on optimal doses being maintained at all times and not on amounts of the active principle that yield distinct improvement in the health of the patient. There is a tendency for patients to receive too little of the active principle.

Dr. Cohn and his collaborators recently succeeded in preparing a new standardized fraction free of proteins, proteoses, peptones, polypeptids, carbohydrates, lipoids, and iron and copper, and sufficiently free from blood pressure reducing substances to be employed intravenously. The purine bases have been removed. Dr. Cohn is continuing his efforts to isolate the active principle from this fraction, which is a relatively pure solution of nitrogenous bases. A little of the material given intravenously to patients with pernicious anemia has produced maximal effects, with prompt response of the reticulocytes and no untoward symptoms. As with the feeding of liver, kidney or potent fractions of liver, an interval of a few days occurs before the reticulocytes commence to rise after the solution of nitrogenous bases has been given intravenously.

An epoch making discovery concerning human gastric physiology and pernicious anemia has been made by Dr. Castle. He has shown from a study of twenty-two cases that whereas the feeding of 200 gm. of beefsteak produces no result in the pernicious anemia patient with achylia gastrica, it will produce the same effect as liver therapy, if fed to the patient daily after suitable digestion with normal gastric juice. No results are obtained if the beefsteak is digested with commercial pepsin and hydrochloric acid. This suggests that no normal human gastric juice can unlock something from the beefsteak necessary for the patient with pernicious anemia.

Current Medical Literature

AMERICAN

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Titles marked with an asterisk (*) are abstracted below.

American Review of Tuberculosis, Baltimore

19: 461-566 (May) 1929

*Trend of Tuberculosis Mortality in Rural and Urban Areas. E. Sydenstricker.—p. 461.
Experiments of Filtrability of Granular Phase of Tubercle Bacillus. R. R. Mellon and E. L. Jost, Pittsburgh.—p. 483.
*Pulmonary Tuberculosis in Children. A. Levinson, Chicago.—p. 499.
*Tuberculous Cervical Adenitis. R. H. Miller and W. M. Shedden, Boston.—p. 511.
Miliary Tuberculosis of Lungs with Recovery: Two Cases. F. W. Marlow, Jr., Boston.—p. 529.
Graphic Method for Blood Sedimentation Test. J. Cutler, Eagleville, Pa.—p. 544.
Relationship Between Blood Sedimentation Index and Fibrin Content in Tuberculous Individuals. E. M. Greisheimer, C. C. Van Winkle and O. H. Johnson, Oak Terrace, Minn.—p. 559.

Trend of Tuberculosis Mortality in Rural and Urban Areas.—Sydenstricker analyzed the tuberculosis mortality in twelve counties of New York state for a twenty-five year period. It appears that the trend of the rural tuberculosis death rate was essentially identical with the urban tuberculosis death rate during the period 1900-1915. Although the urban rate maintained itself at a ratio to the rural rate of about 2 to 1, the proportionate decline was approximately the same in the two populations. Immediately subsequent to the depression of 1914-1915 and in the influenza epidemic of 1918, a rise in mortality attributed to tuberculosis occurred which was followed by a sharp drop in the death rate from the disease in 1919-1921. In these three years the urban rate declined more rapidly than the rural. Since then both rates have been declining somewhat more rapidly than in the period 1900-1916.

Pulmonary Tuberculosis in Children.—Of ninety-nine cases of pulmonary tuberculosis in children analyzed by Levinson, sixty-nine were miliary, fifteen acute tuberculous pneumonia, and fifteen subacute or chronic pulmonary tuberculosis. The tuberculin tests were negative in all cases of miliary tuberculosis. In some cases the tuberculin tests, which were positive when the patient entered the hospital, became negative when repeated after the onset of a miliary process. The pulmonary involvement in both the acute and the subacute forms was quite extensive and was mainly caseo-ulcerative in type. The prognosis in all the acute cases was bad.

Tuberculous Cervical Adenitis.—Miller and Shedden believe that in a considerable number of cases of early tuberculous cervical adenitis, whether in children or in adults, and often in cases of longer duration in which operation is technically feasible, radical surgical operation is the method of choice. The operation must be supplemented by all the supportive and palliative measures available.

Canadian M. Assoc. Journal, Montreal

20: 469-586 (May) 1929

Treatment of Cancer. H. A. Bruce, Toronto.—p. 469.
Pulmonary Tuberculosis of Childhood and Adolescence and Differential Diagnosis. F. M. McPhedran, Philadelphia.—p. 476.
Varicose Veins and Treatment by Sclerosis. H. G. Pretty, Montreal.—p. 481.
*Gastric Carcinoma as to Earliest Symptoms: 137 Cases. W. Goldie, Toronto.—p. 486.
*Juvenile Diabetes. I. M. Rabinowitch, Montreal.—p. 488.
*Intramuscular Injections of Camphor in Treatment of Engorgement of Breasts. N. W. Philpott, Montreal.—p. 494.
*Effects of Long Wave Roentgen-Rays on Staphylococcus Aureus and on Microsporum Audouini. A. Bertrand and A. Marin, Montreal.—p. 496.
Operative Treatment of Spina Bifida. A. M. Forbes, Montreal.—p. 497.
*Trypsin and Ephedrine Dissolved in Gomenol as Therapeutic Agents in Allergic Conditions. A. H. W. Caulfeild, Toronto.—p. 498.
Chronic Intestinal Indigestion (Celiac Disease). H. Little, London, Ont.—p. 500.
*Chronic Otorrhea; Treatment with Calot's Solution. I. Harnick, Chicago.—p. 503.
Lid Repair: Two Cases. S. H. McKee, Montreal.—p. 506.
Syphilitic Cirrhosis of Liver: Unusual Complications. A. W. Blair, Montreal.—p. 508.
Pulmonary Gangrene with Empyema and Acute Meningismus Due to Ascaris Lumbricoides. L. A. Middleton, Montreal.—p. 510.
Exomphalos or Extroversion of Viscera in New-Born: Case. S. W. Baker, Whitewood, Sask.—p. 512.

Gastric Carcinoma as to Earliest Symptoms.—The 137 cases analyzed by Goldie have been divided into two classes: (1) patients having had previous indigestion, numbering forty-six, referred to as plus; (2) those without previous indigestion, numbering ninety-one, referred to as minus. In each class the age incidence is almost the same. In the minus cases only five occurred before the age of 40, and in the plus cases only three. The average duration between the earliest symptoms and a definite diagnosis was in each class eight months, with extremes in both classes of a few days to two years. The average time between the earliest symptoms and the consulting of a physician was for the plus cases four and a half months and for the minus cases five and a half months, which leaves the average time between consulting a physician and a definite diagnosis three and a half months for the plus cases and two and a half months for the minus cases. In one third of the minus cases there were no local abdominal symptoms for weeks or months, so that in this third the only reasons for suspecting carcinoma were the age of the patient and the lack of other sufficient cause or causes for the existing symptoms. In the plus cases there were ten patients not having had indigestion or serious illness for nine or more years. Allowing for these, in the remaining plus cases there appeared symptoms not associated with former indigestions, which were taken as the earliest symptoms, and when so taken there is a close agreement between the two classes, plus and minus, as to the variety and the percentage of initial symptoms in each, so that loss of appetite, loss of weight and loss of strength were the earliest symptoms in one third of the plus cases. The initial symptoms vary greatly from such general ones as loss of weight, loss of strength and loss of color to local distresses simulating at this stage any form of disordered action of the esophagus, stomach, duodenum or colon. In thirteen cases, or nearly 10 per cent, the first symptoms were focal, arising from a metastasis without general or gastric symptoms. The observations from examination of the stomach contents during the early symptomatic stage are more misleading than helpful. In this stage the most helpful aid is roentgen examination by a persistent expert.

Juvenile Diabetes.—Rabinowitch asserts that the outlook of the child suffering from diabetes mellitus, but properly treated, is not only good but much better than that of the adult, since proper treatment leads to improvement of carbohydrate tolerance.

Intramuscular Injections of Camphor in Treatment of Engorgement of Breasts.—Experience has convinced Philpott that camphor has a definite inhibiting action on the secretion of milk. Camphor in oil was the sole form of medication employed by him in eighty cases. A loose Indian binder was used in an occasional case to support pendulous breasts, but no form of pressure binder was used at any stage. Intramuscular injections of camphor in oil were given, 1½ grains (0.1 Gm.) to a single dose. The first day two injections were given, with one daily injection the following three days. In any patient who was not intended to nurse on account of a stillborn baby or owing to some other cause known at the time of delivery, it was found advisable to start this treatment the first day after delivery. Injection of camphor in oil is a far simpler and less painful method of treatment than that of applying tight binders, local applications of ice, or the administration of large doses of magnesium sulphate.

Effects of Long Wave Roentgen Rays on Staphylococcus Aureus and Microsporum Audouini.—Bertrand and Marin found that the long wave rays have no effect, at least in vitro, on the microbes and fungi studied, since no change was observed in the rapidity, quantity, quality or virulence of the irradiated cultures.

Trypsin and Ephedrine in Allergic Conditions.—Instillation into the trachea of about 2 cc. of ephedrine (from 1 to 1.5 per cent) dissolved in a cajuput oil prepara-

tion by the supraglottic method has been tried by Caulfeild in seventeen cases of bronchial asthma. In only two cases has it been without favorable effect; in six it had considerable effect and in nine was of pronounced benefit, as contrasted with all other methods previously employed. Two features have been noticeable in the cases in which this has been tried that are worthy of special note. The favorable effect on the asthma, presumably from the ephedrine, has been prolonged from about two to six days. No instance has been encountered of idiosyncrasy to ephedrine. The instillations are usually made at weekly or biweekly intervals. Trypsin, 90 grains (6 Gm.) daily (in three doses of 30 grains [2 Gm.] each) for ten days, followed by an intermission, has also yielded good results in these and other allergic cases.

Chronic Otorrhea Treated with Calot's Solution.—The composition of Calot's mixture is as follows: guaiacol, 1; creosote, 5; sulphuric ether, 30; iodoform, 10, and olive oil, 70. The ear should be cleaned of all secretions that may be present in it at the time. After the bottle has been carefully shaken, from five to ten drops of the solution is instilled into the canal of the affected ear, the head being bent to one side so that the treated ear is uppermost. In order to get the disinfecting fluid into the eustachian tube, Harnick employs tragus massage. In this method the opening of the external canal is closed by pressing the tragus against the canal wall and bringing alternate pressure to bear on it so as to effect a pumping action on the mixture. This massage is kept up till the patient feels the medicament in the throat. This procedure is carried out every night for a week. Nothing else is done. By this time the secretion will have changed from a thick, ropy to a thin, serous nature. When it is also markedly reduced in amount, the instillations of Calot's solution are discontinued, and insufflations of boric acid powder are used. After several of the latter procedures, the ear will appear dry.

Journal of Experimental Medicine, Baltimore

49: 705-897 (May 1) 1929

Blood Calcium Distribution in Anaphylaxis in Guinea-Pig. H. Brown and S. G. Ramsdell, Philadelphia.—p. 705.
Oxidation-Reduction Equilibria in Biologic Systems: II. Potentials of Aerobic Cultures of Bacillus Typhosus. C. B. Coulter and M. L. Isaacs, New York.—p. 711.
Precipitable Substances of Bacilli of Salmonella Group. J. Furth and K. Landsteiner, New York.—p. 727.
Production of Partial Liver Insufficiency in Rabbits. P. D. McMaster and D. R. Drury, New York.—p. 745.
*Total Surgical Removal of Liver in Rabbits. D. R. Drury, New York.—p. 759.
*Relation of Liver to Fat Metabolism: I. Effect of Liver Lack on Fat Combustion and Respiratory Quotient. D. R. Drury and P. D. McMaster, New York.—p. 765.
Mechanism of Opsonin and Bacteriotropin Action: I. Correlation Between Changes in Bacterial Surface Properties and Phagocytosis Caused by Sera of Animals Under Immunization. S. Mudd, B. Lucké, M. McCutcheon and M. Strumia, Philadelphia.—p. 779.
Id.: II. Correlation Between Changes in Bacterial Surface Properties and Phagocytosis Caused by Normal and Immune Sera. B. Lucké, M. McCutcheon, M. Strumia and S. Mudd, Philadelphia.—p. 797.
Id.: III. Development and Effect of Antibodies Found in Experimental Tuberculosis of Rabbits. M. McCutcheon, M. Strumia, S. Mudd, E. B. H. Mudd and B. Lucké, Philadelphia.—p. 815.
*Transmission of Respiratory Anaphylaxis (Asthma) from Mother to Offspring. B. Ratner and H. L. Gruehl, New York.—p. 833.
Soluble Specific Substance Derived from Gum Arabic. M. Heidelberger, O. T. Avery and W. F. Goebel, New York.—p. 847.
Biometry of Calcium, Inorganic Phosphorus, Cholesterol and Lipoid Phosphorus in Blood of Rabbits: III. Influence of Various Types of Light Environment. A. R. Harnes, New York.—p. 859.
Reactions of Rabbits to Nonhemolytic Streptococci: II. Skin Reactions in Intravenously Immunized Animals. H. F. Swift and C. L. Derick, New York.—p. 883.

Total Surgical Removal of Liver in Rabbits.—A technic is described by Drury for total removal of the liver of the rabbit without circulatory difficulties as a result. The method requires a preliminary operation to induce a development of portal and caval collaterals. Rabbits deprived of the liver in this manner, if given dextrose, live for varying periods up to forty hours. Before death they show the same disturbances as do hepatectomized dogs. They die early, of hypoglycemia, unless provided with sugar.

Effect of Liver Lack on Fat Combustion and Respiratory Quotient.—Drury and McMaster assert that fat combustion is carried on adequately in rabbits deprived of the liver or brought into a condition of extreme liver insufficiency. Even twenty-four hours after hepatectomy, fat combustion goes on as well as in the normal animal. Evidently the liver plays no essential part in the breaking down of fat.

Transmission of Respiratory Anaphylaxis from Mother to Offspring.—Ratner and Gruehl succeeded in inducing respiratory anaphylaxis in a pregnant guinea-pig by the inhalation of a dry antigenic dust, and the anaphylaxis was transmitted from mother to offspring. A guinea-pig thus sensitized in utero, when brought into contact for the first time with an anaphylactogenic dust to which the mother was sensitized, will manifest respiratory anaphylaxis. This state of hypersensitiveness may be transmitted in varying degrees of intensity, and when two or more offspring are born in the same litter they may in some instances be sensitized to an equal degree and sometimes to different degrees. This state of hypersensitiveness can be transmitted through more than one litter.

Journal of Nervous & Mental Disease, New York

69: 481-616 (May) 1929

Opening of New Home of German Research Institute for Psychiatry (Kaiser Wilhelm Institut) in Munich. F. Plaut, Munich.—p. 481. (Translation by Dr. Sam Parker, New York.)
*New Sign of Cerebellar Disease. F. I. Wertham, Baltimore.—p. 486.
*Epileptic Manifestations in Group of Schizophrenic and Manic Depressive Psychoses. J. Notkin, New York.—p. 494.
*Myasthenia Gravis. A. Querido, Leiden, Holland.—p. 522.
Oculogyric Crises as Compulsion Phenomena in Postencephalitis. S. E. Jelliffe, New York.—p. 531.
*Transmission of Pain and Temperature Within Spinal Cord: Human Cordotomy to Abolish Pain Sense Without Destroying Temperature Sense. B. Stookey, New York.—p. 552.

New Sign of Cerebellar Disease.—A new test described by Wertham consists of an examination of the ability to perform correctly voluntary successive movements of a definite rhythm but not at a prescribed speed. In testing the reversal of movements in adiadokokinesis the rhythmic plan of the movements is left to the patient, just as is the flow of associations in an experiment with free associations, to use a comparison from the psychologic sphere. If, on the other hand, the patient is asked to tap definite rhythmic patterns, the reversals of movement are definitely conditioned according to a plan introduced by the examiner, comparable, in the psychologic sphere, to an experiment with conditioned associations. Marked disorders in rhythm can be detected by simply letting the patient tap with his finger on a hard surface. For a more exact analysis, however, a graphic registration is necessary. The apparatus used is described. With this apparatus a large number of patients was examined, mainly of the type showing adiadokokinesis. A characteristic disturbance was found which consists in inability to repeat voluntary rhythmic movements correctly, independent of speed, a disturbance which can be tested conveniently by tapping. In its typical form the disorder consists in a loss of the rhythmic pattern. The subject may be able in his first attempts to approach the rhythmic pattern closely, but as the tapping is continued the rhythm becomes disturbed. The disorder becomes markedly more pronounced when the tapping is performed with both hands. In some cases the characteristic disturbance is brought out only when the tapping is done simultaneously with the two hands. This disturbance is associated with adiadokokinesis but is distinct from it. The test of arrhythmokinesis was carried out in a variety of conditions, including practically all disturbances in which adiadokokinesis can occur. It was found that the occurrence of arrhythmokinesis does not coincide with the occurrence of adiadokokinesis. In the cases tested so far the typical disturbance of arrhythmokinesis has been found only in cases with involvement of the cerebellar system. Arrhythmokinesis seems to be more characteristic of cerebellar dysfunction than is adiadokokinesis. In testing the former in cerebellar disease it was found that when the hands tapped simultaneously the typical disorder was increased. On the contrary, in cases of Parkinson's syndrome with adiadokokinesis the simultaneous tapping with the two hands tended to improve the rhythm. The cerebellar cases showing the characteristic arrhythmokinesis included various pathologic conditions, such as cerebellar tumor, extracerebellar tumor with compression of the cerebellum, encephalitis with involvement of the cerebellum, and disseminated sclerosis with involvement of the cerebellum.

Epileptic Manifestations in Group of Schizophrenic and Manic Depressive Psychoses.—Epileptic manifestations of the major and minor types have been observed by Notkin in eight cases, three manic depressive and five schizophrenic patients. The occurrence is rather rare.

Myasthenia Gravis.—The case reported by Querido presented all clinical characteristics of myasthenia; also changes in striated muscles, liver, lung and kidney. Those changes consisted of perivascular foci containing leukocytes, lymphocytes, plasmatic cells, fibroblasts and ripe fibrous tissue, with traces of hemorrhage; the walls of the vessel running through such foci were infiltrated with the same types of cells. Supported by some evidence from the literature, the hypothesis is offered that myasthenia gravis is a general vascular disease, to be defined pathologically as a perivasculitis chronica proliferans.

Transmission of Pain and Temperature Within Spinal Cord.—Stookey asserts that the pain sense is carried in the lateral spinothalamic tract and the temperature sense in a tract more ventrally placed. It is suggested that this tract may be the ventral spinothalamic tract. Hence, cordotomy can be done so as to abolish pain sense without abolishing temperature sense. This, it is felt, is a distinct advance in the clinical application of surgery of the spinal cord for the relief of pain. From a study of histologic sections of the spinal cord to determine the exact position of the lateral spinothalamic tracts, it became apparent that a sickle-shaped knife cut considerably more of the cord than was necessary to section the lateral spinothalamic tract. This type of knife, therefore, was not used. Instead, an attempt was made to cut with a fine straight knife the lateral spinothalamic tract without cutting the more central columns. A delicate lateral incision just ventral to the dentate ligament is made, and the knife brought out just lateral to the ventral horn. By varying the depth of the incision, one may vary the segmental level of the anesthesia, since apparently the more distal segments lie nearest the periphery of the cord. This procedure has been used in four consecutive cases and in each pain sense was lost, but temperature sense was retained. Both moderate and extreme degrees of heat and cold were readily appreciated and had their normal effect, while painful stimuli were lost. Tactile localization and discrimination were unaffected. Pinpoint was recognized as a point, but no painful affect was produced. Muscle, joint and tendon sense, and vibratory sense were normal. Two of these patients were operated on for intractable unilateral pain through Taylor's hemilaminectomy, and a unilateral cordotomy was done in each, so as to cut the lateral spinothalamic tract without cutting the more ventral columns. In the two remaining patients, a bilateral laminectomy and a bilateral cordotomy for pain arising from inoperable tumors of the pelvis was done in the same manner.

Journal of Urology, Baltimore

21: 527-644 (May) 1929

*Blood Stream Infections in Urology: Eighty-Two Cases. W. W. Scott, Baltimore.—p. 527.
I. Comparative Study of Intravesical Ureters (Ureterovesical Valves) in Man and Experimental Animals. C. M. Gruber, St. Louis.—p. 567.
Arterial Supply of Congenital Polycystic Kidney and Relation to Clinical Picture. S. A. Ritter and G. Baehr, New York.—p. 583.
Gonococcal Infection of Kidney: Three Cases. W. G. Shultz, Tucson, Ariz., and C. S. Vivian, Phoenix, Ariz.—p. 593.
Papillary Adenocarcinoma of Renal Pelvis. G. R. Livermore, Memphis, Tenn.—p. 601.
Spontaneous Disappearance of Papillary Carcinoma of Bladder. A. O. Wilensky and A. Firestone, New York.—p. 611.
Suprapubic Cystotomy in Bladder Paralysis. M. L. Boyd and M. K. Bailey, Atlanta, Ga.—p. 623.
Spinal Cord Bladder. J. T. Priestley, Philadelphia.—p. 635.

Blood Stream Infections in Urology.—In 62 per cent of the eighty-two cases analyzed by Scott, the blood stream infections were postoperative in origin. The urethra was the probable portal of entry in 80 per cent of the cases. Seventy-seven per cent of the patients had bacillary and 23 per cent coccal infections of the blood stream. *Bacillus coli* was found most frequently, occurring in 40 per cent of the cases. Death resulted in 18 per cent of the cases. In about 74 per cent of these, the infections were postoperative in origin and occurred, for the most part, in patients that were relatively poor operative risks. The greatest hope from the standpoint of treatment is to be found in the field of prevention. In the true cases of septicemia it is most important to locate and eliminate, where possible, the primary focus of infection. In the presence of sepsis preoperative or postoperative, whether the blood cultures are positive or not, intravenous therapy may often be of great help.

Kansas M. Society Journal, Topeka

30: 143-178 (May) 1929

Repair of Hare Lip and Accompanying Nasal Deformity. E. C. Padgett, Kansas City.—p. 143.
Acute Abdomen. L. F. Barney, Kansas City.—p. 147.
Acute Encephalitis: Unusual Case. F. I. Wilson, Kansas City.—p. 153.
*Hemochromatosis: Case. P. M. Krall and A. M. Ginsberg, Kansas City.—p. 155.
Primary Carcinoma of Lung: Three Cases. C. G. Leitch, Kansas City.—p. 160.
Treatment of Nephritis in Children. H. L. Dwyer, Kansas City.—p. 165.
Internal Derangements of Knee Joint. C. B. Francisco, Kansas City.—p. 167.
Conservative Treatment of Otitis Media of Infants. C. B. Summers, Kansas City.—p. 169.

Hemochromatosis.—In the case reported by Krall and Ginsberg, no pigmentation of the skin was noted and therefore, one of the main diagnostic features being absent, the true condition of the disease present was entirely missed. The symptoms were those of diabetes mellitus with some inflammatory brain lesion present. The hemochromatosis was discovered at the postmortem.

Kentucky M. Journal, Bowling Green

27: 185-242 (May) 1929

Treatment of Typhoid Fever. T. T. Gibson, Middlesboro.—p. 187.
Infant Diet and Hygiene During First Year. A. A. Shapero, Louisville.—p. 192.
Peptic Ulcer: Evaluation of Methods of Diagnosis and Treatment. A. M. McKeithen, Louisville.—p. 197.
Cases Treated by Venoclysis. G. A. Hendon, Louisville.—p. 202.
Recurrent Mesenteric Cyst: Case. J. D. Hancock, Louisville.—p. 206.
Cavernous Nevus of Thigh and Loin. J. G. Sherrill, Louisville.—p. 209.
Puerperal Infection: Case. H. A. Davidson, Louisville.—p. 211.
Meckel's Diverticulum: Diverticulectomy. G. P. Grigsby, Louisville.—p. 214.
Subtotal Thyroidectomy for Exophthalmic Goiter. F. R. Rankin, Rochester, Minn.—p. 218.
Treatment of Postoperative Hernia. G. Gaither, Hopkinsville.—p. 225.
What General Practitioner Should Know About Radiation Therapy. W. F. Boggess, Louisville.—p. 227.
Scarlet Fever. F. G. Speidel, Louisville.—p. 234.

Medical Journal and Record, New York

129: 541-600 (May 15) 1929

Injection Treatment of Varicose Veins. M. B. Cooperman, Philadelphia.—p. 541.
Treatment Points on Gastroduodenal Ulcer. A. Bassler, New York.—p. 544.
Anal Cryptitis: Causes and Effects. J. B. Becker, Philadelphia.—p. 547.
*Capillary Drainage in Treatment of Keloidal Scars. J. E. Sheehan, New York.—p. 548.
Sacro-Iliac Joint Displacements. H. Winsor, Philadelphia.—p. 550.
Neurogenic and Psychogenic Disorders of Skin. J. J. Eller, New York.—p. 554. (Continued from page 485.)
Gummata of Endometrium After Childbirth. G. O'B. DeBar, Eugene, Ore.—p. 559.
Steinach and Journal of American Medical Association. H. Benjamin, New York.—p. 560.
Reduction of Blood Plasma Chloride Concentration. H. A. Higley, New York.—p. 563.
Vitamin B. R. H. Rose, New York.—p. 565.
Basic Principles of Metabolism Test. H. Swanberg, Quincy, Ill.—p. 566.
Importance of Diet in Treatment of Disease. M. Einhorn, New York.—p. 569.
Improvement of Tolerance in Diabetic Patients and Importance of Early and Adequate Treatment. H. J. John, Cleveland.—p. 570.
*Exophthalmic Goiter and Its Basal Metabolism. I. Bram, Philadelphia.—p. 574.
*Simple Formula for Calculating Diabetic Diet. I. Finkelstein, New York.—p. 577.
New Self-Retaining Specula, Fixable Within Vagina, for Purposes of Examination, Treatment and Operation. E. Guttmann, Berlin-Charlottenburg, Germany.—p. 579.
Tenaculum Scissors for Episiotomy. S. P. Goldberg, New York.—p. 582.
Children of Renaissance and Medicine: IV. Art of Montaigne. J. Wright, Pleasantville, N. Y.—p. 583.

Capillary Drainage in Treatment of Keloidal Scars.—Sheehan describes a method of draining the subsurface of keloidal scars by means of hygroscopic suture threads introduced at three skin levels, the lowest midway of the corium, the next above at the base of the papillae, and the uppermost in the malpighian layer of the epidermis, about at the tops of the papillae, the ends of the threads emerging from the surface of the skin. The "weeping" from the surface threads, indicative

that the hygroscopic threads are serving as channels for the passage of fluids, begins almost immediately, and is followed by blanching and softening of the structure, with obvious subsidence of the raised mass. As the threads may "choke" below the surface, interrupting the flow, careful watch is kept for signs of such interruption. When it is noted, the threads are withdrawn and others are inserted. Where the conditions are especially refractory this may have to be repeated fairly often. Normally, the weeping can be expected to terminate within ten days. If numerous renewals of the threads are needed, the process may go on for a much longer time. Occasionally the weeping does not occur in a measure that justifies the expectation, or at all. In that case, a shaving is taken from the surface, equivalent to a Thiersch graft in thickness. This amounts to the removal of the stratum corneum and of the malpighian layer down to the tops of the papillae, as demonstrated by the infinitesimal blood points. The shaving is carried, to the same depth only, a little past the edges of the scar. When reduction, change of character and pliability of the scar has been reached, excision is followed by approximation, with little apprehension of recurrence.

Exophthalmic Goiter and Its Basal Metabolism.—As a result of having made more than thirty thousand basal metabolic tests, Bram concludes in part: Repeated metabolic studies must be made in all cases of actual or suspected thyroid disease. The basal metabolic rate must never be the sole diagnostic factor, but this observation should be regarded as a valuable supplement to other laboratory procedures and the clinical experience of the medical attendant. The basal metabolic rate may vary widely in apparently normal individuals, particularly in those with peculiar "metabolic temperaments." The greatest use of the basal metabolic rate is in the differentiation of atypical exophthalmic goiter without exophthalmos and goiter from many other conditions which resemble it. Though the basal metabolic rate in exophthalmic goiter is generally indicative of the severity of the disease, there are many exceptions in which the condition of the circulatory and nervous system are the determining factors, and the basal metabolic rate is relatively low. Occasionally a patient fully recovers with a persistently high basal metabolic rate. In many instances, especially during remissions following shortly after thyroidectomy or iodine administration, a normal basal metabolic rate is no indication of normality of the individual or of a safeguarded future. Combinations of hypothyroidism and hyperthyroidism, usually the result of surgical treatment, frequently yield a normal or subnormal basal metabolic rate, yet the patient is by no means well, presenting myxedema and a modified exophthalmic goiter each in varying proportion. An extended clinical study of the basal metabolic rate and other features of exophthalmic goiter points strongly to the view that the syndrome is not goiter but a constitutional condition in which the autonomic nervous system and the ductless glands are in a state of disequilibrium (neuro-endocrine dysfunction); the participation of the thyroid gland appears to be incidentally or sequentially related. To state that toxic adenoma (hyperthyroidism) and exophthalmic goiter are synonymous merely confuses the issue. In the hyperthyroidism of toxic adenoma (a local disease) it is the thyroid that makes the body sick; in exophthalmic goiter (a constitutional condition) it is the body that makes the thyroid sick.

Simple Formula for Calculating Diabetic Diet.—The formula presented by Finkelstein is P equals 0.4 W; C equals 0.4 W; F equals W, where P, C and F are in grams and W the desired weight in pounds. In children 15 years old W is one and one-half times weight in pounds; in children 10 years old W is two times weight in pounds; and in children 5 years old W is two and one-half times weight in pounds. Such a diet will be sufficient in calories and protein for maintenance, and will not permit acidosis. Additions to the diet can easily be made, maintaining the ratio FA: G equals 1.5: 1 by keeping the added P, C and F in the ratio 1: 1: 2.5.

Military Surgeon, Washington, D. C.

64: 659-842 (May) 1929

Prisoners of War. P. M. Ashburn.—p. 659.
Researches on Shock Reaction Before Great War Confirmed by Actual Experience in War. F. B. Turck.—p. 687.
Prevalence and Distribution of Malaria on Island of Corregidor, Philippine Islands. J. S. Simmons and J. H. St. John.—p. 710.
Special Training for Medical Supply Officers of Army. E. C. Jones.—p. 734.
A Month on the Mexican Border. H. S. McConkie and Mrs. McConkie.—p. 741.
Hospital Real De Espanoles De Manila Now Sternberg General Hospital. L. L. Gardner.—p. 744.

Missouri State M. Assoc. Journal, St. Louis

26: 207-270 (May) 1929

*Epidemic Meningitis. A. Sophian, Kansas City.—p. 207.
Favus of Scalp: Roentgen Therapy. N. Tobias, St. Louis.—p. 212.
Management of Jaundice and Ascites. C. H. Greene, Rochester, Minn.—p. 214.
Urology in Children. J. H. Sanford, St. Louis.—p. 220.
Asthma and Hay-Fever. D. D. Stofer, Kansas City.—p. 224.
Tuberculosis in St. Louis. H. H. Bell, St. Louis.—p. 226.
Diagnosis of Congenital Diaphragmatic Hernia: Case. E. J. Schisler, St. Louis.—p. 228.
Civilization and Medicine. P. Baldwin, Kennett.—p. 231.
Tularemia in Missouri: Case. C. W. Luter, Adrian.—p. 236.

Epidemic Meningitis.—Sophian repeats that serum treatment should be actively administered during the first few days of the illness and kept up until bacteria disappear from the cerebrospinal fluid. If treatment is stopped too soon there is danger of a subacute or chronic condition causing complications. After the patient has been well saturated with serum, administered by daily injection for two, three, four or more doses, with considerable improvement in the local suppurative condition, one should be alertly on the watch for pressure symptoms and, if necessary, relieve the pressure by puncture. In cases which show a complete disappearance of septic symptoms, after the first few days of serum treatment (even though a few intracellular meningococci persist in the cerebrospinal fluid) while pressure symptoms are pronounced, one may tap with simple removal of fluid one day and the next day, if necessary, repeat the treatment, this time also injecting a small dose of serum. Patients with pressure symptoms from large quantities of cerebrospinal fluid may have to be treated in this way for a week or longer. If a few organisms persist in the cerebrospinal fluid but cause no septic phenomena, serum may be administered only on alternate days.

Nebraska State M. Journal, Norfolk

14: 177-216 (May) 1929

Studies on Testicle Transplantation. C. R. Moore, Chicago.—p. 184.
Management of Empyema Complicating Influenza or Early in Pneumonia. C. Emerson, Lincoln.—p. 188.
Studies in Morphologic Hematology: I. Basophilic Granulated Substance in Erythrocytes. N. A. Michels, Omaha.—p. 193.
Medical Profession, Public Health and Public. W. H. Wilson, Lincoln.—p. 197.
Treatment of Pernicious Anemia. V. E. Levine, Omaha.—p. 201.
Typical Diets in Pernicious Anemia. V. E. Levine, Omaha.—p. 203.
Treatment of Thyroid Disturbances. A. M. Sonneland, Norfolk.—p. 206.

New England J. Medicine, Boston

200: 959-1014 (May 9) 1929

Emptying Time of Kidney Pelvis. E. L. Peirson, Jr., Salem, Mass.—p. 959.
Operative Treatment of Varicose Veins, Varicose Ulcers and Phlebitis. J. Homans, Boston.—p. 965.
Injection Treatment of Varicose Veins. E. E. O'Neil, Boston.—p. 972.
*Spermatozoa Count. D. Macomber and M. B. Sanders, Boston.—p. 981.
Postoperative Pulmonary Complications: Three Hundred Consecutive Surgical Cases. H. K. Sowles, Boston.—p. 984.
Traumatic Subastragalar Arthropathy. D. S. O'Connor, New Haven, Conn.—p. 987.
Abuse of Drugs in Certain Psychopathic States: Cases. K. J. Tillotson, Waverley, Mass.—p. 990.

200: 1015-1070 (May 16) 1929

Diagnosis of Lobar Pneumonia. R. Fitz, Boston.—p. 1015.
Endometriosis; Edometriomata in Abdominal Wall: Four Cases Following Pelvic Operations. J. V. Meigs, Boston.—p. 1020.
Rupture of Pregnant Horn of Bicornate Uterus. P. E. Truesdale, Fall River, Mass.—p. 1031.
Tuberculosis Reporting and Tuberculosis Mortality. D. Zacks, Boston.—p. 1036.
Congenital Single Kidney with Associated Absence of Uterus and Vagina: Case. E. A. Adams, Fitchburg, Mass.—p. 1037.
Minimum Standards for Diagnosis, Treatment and Control of Syphilis. N. A. Nelson, Boston.—p. 1038.
Resection of Small Intestine According to Technic of Mikulicz. W. M. Shedden, Boston.—p. 1042.
Progress in Public Health and Medicine During 1928. H. H. Moore, Washington, D. C.—p. 1044.

Spermatozoa Count.—Macomber and Sanders have counted the spermatozoa of 294 men as means of establishing a fertility index. It is their belief that the concentration of the

spermatozoa per cubic centimeter, rather than the total number, is of importance in fertility. Fertility is lowered as age increases, although the lowering is gradual rather than sudden, as seen in the fertility of women. In estimating the fertility of a male patient, the size of the testes may be noted as a factor. In general the testes of small volume are the ones with low counts and, as the volume increases, the numbers are also higher. There have been only four cases in which there has been a pregnancy when the spermatozoa count was less than 60,000,000 per cubic centimeter. There were seven other pregnancies with counts between 60,000,000 and 70,000,000; five pregnancies between 70,000,000 and 80,000,000. Above 80,000,000 per cubic centimeter there were thirty-six pregnancies. These figures would seem to show that although pregnancy is not impossible with a count below 60,000,000, the chances are slight without an increase in numbers. With counts over 60,000,000 the chances of pregnancy are correspondingly increased if all other factors are favorable. The spermatozoa count has proved to be of importance not only in the diagnosis of fertility but also in gaging the effect of treatment. It is a simple test and can be performed easily and accurately. It seems to be as accurate as head length measurement and is far simpler to do.

New Orleans M. & Surg. Journal

81: 769-852 (May) 1929

New Era in General Surgery. W. H. Anderson, Booneville, Miss.—p. 769.
Better Physician. E. B. French, McComb, Miss.—p. 773.
Food Contamination. D. G. Rafferty, Pass Christian, Miss.—p. 775.
Foreign Proteins in Treatment of Diseases of Eye. W. L. Benedict and C. W. Rucker, Rochester, Minn.—p. 782.
Eye Picture in Relation to Intracranial Lesion: Case. F. Champenois, Hattiesburg, Miss.—p. 795.
Contusions of Eye. M. H. Bell, Vicksburg, Miss.—p. 798.
Nasal Fractures and Treatment. V. H. Fuchs, New Orleans.—p. 802.
Plea for Selection of Pars Membranacea in Puncturing Maxillary Sinus. M. P. Boebinger, New Orleans.—p. 806.
Arthritis. J. T. O'Ferrall, New Orleans.—p. 809.
Digitalis. T. E. Williams, Shreveport, La.—p. 813.
Obscure Symptoms Presented by Anomalous Kidneys: Three Cases. B. Johns, Shreveport, La.—p. 821.
Tuberculosis. T. D. Bordeaux, Meridian, Miss.—p. 824.
Wounds. A. Ochsner, New Orleans.—p. 826.

Northwest Medicine, Seattle

28: 199-244 (May) 1929

Mediastinal Lymphadenitis. A. S. Rosenfeld and F. McCauley, Portland, Ore.—p. 199.
Toxic Adenoma and Exophthalmic Goiter: Eleven Thousand Cases. I. Bram, Philadelphia.—p. 210.
Malfunctions of Thyroid in Relation to Aviation. A. M. Brailsford, Fort Worden, Wash.—p. 215.
Classification of Thyroid Disease. M. S. Rosenblatt, Portland, Ore.—p. 219.
Skin Diseases Caused by Internal Disturbances. F. A. Black, Seattle.—p. 220.
Paralytic Ileus and High Intestinal Obstruction: Six Cases. M. T. Nelsen, Tacoma, Wash.—p. 222.
*Intravenous Glucose Solution. L. J. Palmer, H. C. Turner and W. E. Gibb, Seattle.—p. 225.
*Congenital Heart Block: Case. G. H. Anderson, Spokane, Wash.—p. 227.
Immunization and Therapy in Communicable Diseases. A. Rembe, Seattle.—p. 229.
Cod Liver Oil and Activated Ergosterol Therapy. N. W. Clein, Seattle.—p. 232.

Intravenous Dextrose Solution.—A simple method of preparing intravenous dextrose solutions has been successfully employed by Palmer et al. for a period of one year. Practically no reactions have occurred following the proper administration of dextrose solution prepared according to the specified technic. No adjustment of the p_H of the solution is made. No special rubber tubing is employed. A good quality of tubing is used after boiling in water and thoroughly washing and cleansing. No special animal tests for toxicity of the various purchases of dextrose are made. Pyrex glassware seems advisable. The important elements in the preparation of intravenous dextrose solutions are as follows: Dextrose solutions more than 15 hours old should not be used, although solutions 24 hours old are probably safe. Only double distilled water which has passed through the still the day of use should be employed. Only anhydrous dextrose of a very high grade of purity should be employed. Ampule solutions of dextrose are safe only when used undiluted or when diluted with freshly and properly distilled water. The preparation of dextrose solutions in a hospital is a laboratory problem and should be done only by experienced technicians.

Congenital Heart Block.—A complete heart block was demonstrated by Anderson by electrocardiogram in a boy, aged 7 years. In the absence of a history of acquired diseases, such as diphtheria, rheumatic fever, syphilis or pyogenic infection, and the presence of a patent interventricular septum, the diagnosis was congenital heart block.

Oklahoma State M. Assoc. Journal, Muskogee

22: 153-197 (May) 1929

Potential Cardiac Diseases in Children. C. M. Pounders, Oklahoma City.—p. 153.
Feeding and Care of Infants. C. V. Rice, Muskogee.—p. 155.
Jejunostomy: Indications; Technic. A. L. Blesh, Oklahoma City.—p. 157.
Use of Local Anesthesia. A. S. Risser, Blackwell.—p. 161.
A Patient or a Case. F. S. Clinton, Tulsa.—p. 165.
Acute Surgical Abdomen. F. H. McGregor, Mangum.—p. 166.
Artificial Pneumothorax. F. P. Baker, Talihina.—p. 167.
Gallbladder Function and Clinical Determination. W. P. Neilson, Enid.—p. 171.
Hematuria. O. R. Gregg, Enid.—p. 174.
Tularemia. R. C. Meloy, Claremore.—p. 177.

Pennsylvania M. Journal, Harrisburg

32: 545-606 (May) 1929

Mechanical Treatment of Trismus. G. M. Dorrance, Philadelphia.—p. 545.
Continuous Intravenous Administration of Fluid and Continuous Drainage of Stomach by Jutte Tube. C. M. Smyth, Jr., Philadelphia.—p. 546.
Relief of Pain in Carcinoma of Face. F. C. Grant, Philadelphia.—p. 548.
Utility of Ligation in Treatment of Buerger's Disease. B. Lipshutz, Philadelphia.—p. 551.
Uses of Living Sutures in Modern Surgery. O. M. Warner, Wilkinsburg.—p. 552.
Biomicroscopy in Industrial Ophthalmology. G. H. Shuman, Pittsburgh.—p. 555.
Problems of Diagnosis from Standpoint of General Practitioner. T. A. Miller, Pittsburgh.—p. 562.
Diagnosis from Standpoint of Ophthalmologist. W. W. Blair, Pittsburgh.—p. 565.
Importance to Internist of Laboratory, Roentgen-Ray and Consulting Specialists in Formulation of Diagnosis. R. R. Snowden, Pittsburgh.—p. 567.
Reactions Following Insulin Injections in Diabetic Child. C. S. Bauman, Lock Haven.—p. 571.
*Sarcoma in Lower Limbs of Dwarfs. H. C. McMillin, Aliquippa.—p. 572.
Infantile Progressive Spinal Muscular Atrophy. I. Binder, Philadelphia.—p. 573.
*Primary Neoplasm of Lung with Metastasis to Liver in Two-Year-Old Child. N. D. Gannon, Erie.—p. 574.

Sarcoma in Lower Limbs of Dwarfs.—McMillin reports four cases of bone sarcoma occurring in two brothers and two sisters, all of whom were dwarfs. There were eight children in this family. The father and mother were normal and there was no family history of dwarfism on either side. The patients were aged 15, 17, 22 and 23 years, respectively, when the malignant disease first manifested itself. The site was the knee in three cases; the tibia in one case. Trauma figured as an etiologic factor in only one case. The diagnosis was verified after operation in three cases.

Primary Neoplasm of Lung with Metastasis to Liver in Two-Year-Old Child.—Gannon feels that tumors of the mediastinum in children probably exist more frequently than they are diagnosed and are usually regarded as persistent thymus, abscess, or foreign body of the lung, or, as in his case, pneumonia. Eventually a diagnosis of primary lymphosarcoma of the lung with metastasis to the liver was made.

Physical Therapeutics, New York

47: 267-316 (May) 1929

Dangers of Spectral Ray Therapy Heliopathy and Heliotherapy. F. F. de Courmelles, Paris, France.—p. 267.
New Concept for Prevention of Gallstones. A. L. Brown, Winchester, Mass.—p. 278.
Medical Diathermy. C. G. Buckmaster, White Plains, N. Y.—p. 286.
Paralysis. H. M. Herring, New York.—p. 289.
Myositis. W. Bierman, New York.—p. 290.
Types of Colitis Amenable to Electrotherapy. L. H. Levy, New York.—p. 297.
New Type of Solenoid. V. C. Pedersen, New York.—p. 303.
Simplified Diathermy Application. J. E. G. Waddington, Detroit.—p. 304.

Public Health Reports, Washington, D. C.

44: 1059-1132 (May 3) 1929

Physical Measurements of Boys and Girls of Native White Race Stock (Third Generation Native Born) in United States. S. D. Collins.—p. 1059.

Rhode Island M. Journal, Providence

12: 67-84 (May) 1929

Spinal Anesthesia. E. A. Shaw, Providence.—p. 67.

Southern Medical Journal, Birmingham, Ala.

22: 417-516 (May) 1929

*Experimental Results in Use of Dead Fascia Grafts for Repair of Defects in Hollow Viscera. A. R. Koontz, Baltimore.—p. 417.
*Air Urography. R. Thompson and L. C. Todd, Charlotte, N. C.—p. 422.
Autopsy Findings in Tuberculosis. A. Blumberg, Oteen, N. C.—p. 428.
Unusual Types of Pyloric Obstruction. J. Friedenwald and T. H. Morrison, Baltimore.—p. 431.
Uterosalpingography. G. Y. Graves, Scottsville, Ky.—p. 439.
Rupture of Healthy-Looking Hypertrophied Heart by Muscular Strain. H. T. Marshall, University, Va.—p. 442.
Clinical Recognition of Arrhythmias. N. S. Stern, Memphis, Tenn.—p. 448.
Gallbladder Operative Mortality. J. R. Verbrycke, Jr., Washington, D. C.—p. 452.
*Nonsurgical Gall Tract Drainage. G. M. Niles, Atlanta, Ga.—p. 455.
Disturbances of Internal Glandular System in Various Neurologic Conditions. W. Timme, New York.—p. 459.
Fatal Emboli from Thromboses of Great Blood Vessels: Concealed Thrombus. B. M. Bernheim, Baltimore.—p. 464.
Treatment of Senile Keratoses. E. S. Lain, Oklahoma City.—p. 467.
Management of Gonorrheal Arthritis. J. A. Key, St. Louis.—p. 469.
Pyelitis Complicating Pregnancy: Two Cases. W. E. Massey, Dallas, Texas.—p. 472.
Is Hysterectomy for Benign Disease Should Cervix Always be Removed? H. W. Kostmayer, New Orleans.—p. 475.
Similarity of Signs and Symptoms of Sphenoiditis to Intracranial Lesions and Differential Diagnosis. W. A. Wagner, New Orleans.—p. 478.
Eye Symptoms in Brain Tumor. W. T. Davis, Washington, D. C.—p. 484.
*Perennial Hay-Fever: Four Hundred and Forty-One Cases. R. M. Balyeat, Oklahoma City.—p. 492.
Prevention of Rabies by Legislative Enactment. C. O'H. Laughinghouse, Raleigh, N. C.—p. 503.
Treatment of Influenza. C. H. Rice, Jr., Montgomery, Ala.—p. 505.
Protein Intake. J. L. Brakefield, Birmingham.—p. 508.
Poor Appetite in Children. C. G. Kerley, New York.—p. 509.

Dead Fascia Grafts for Repair of Defects in Hollow Viscera.—As reported previously, alcohol-preserved fascia grafts have been successfully used by Koontz to repair defects in the stomach and bladder, and to reinforce suture lines at anastomosis points in the intestine. Digestion of the graft in the stomach was prevented by giving bismuth subnitrate by mouth.

Air Urography.—Thompson and Todd have had no bad results in 122 examinations of 116 patients, following injection of air into the bladder, for roentgen examination.

Nonsurgical Biliary Tract Drainage.—Niles reviews his experience with this procedure in more than 600 cases. Of the patients who have been drained five or more times, about 75 per cent exhibited symptoms of cholecystitis or cholangeitis, separate or combined. The majority of these patients gave a history of malaria, typhoid or influenza, while many of them had had bad teeth or tonsils, or accessory sinuses. None admitted good digestion. About 5 per cent gave a history of one or more attacks of severe colic. In fifteen cases gallstone shadows were demonstrated, while in thirty-six cases a tentative, but probably correct, diagnosis of cholelithiasis was made. In 65 per cent the improvement is definite, the digestive symptoms are relieved or greatly ameliorated, and this desirable state of affairs has lasted from three months to three years. Some cases of cholecystitis or choledochitis have seemed permanently relieved; at least this relief has lasted from three to eight years. In about 20 per cent the results have been fairly satisfactory, so that the patients have come back from time to time for additional drainage; but some of the uncomfortable symptoms have persisted to an extent. Ten per cent either failed to return for further observation and treatment or were lost sight of. In 5 per cent no good results were attained. Some of these were aged patients; some were of that temperamental trend who either objected to the slight discomfort attendant on the procedure or who failed to cooperate. In some others it is probable that either a faulty diagnosis was made or that there were other pathologic conditions which remained, and which could not be favorably influenced by biliary tract drainage. Niles emphasizes that the assumption that this method will remove gallstones, break up adhesions, cure appendicitis or cancer of the liver, or remove deep-seated organic disease of the biliary tract is unwarranted, and the patients should be so informed. Furthermore, in his opinion, no physician should employ this method unless he enters into it wholeheartedly, performing it in a technically correct manner, and being willing to persevere in his efforts.

Perennial Hay-Fever.—Among the 441 perennial hay-fever cases studied by Balyeat, none were found in which he could demonstrate a hypersensitive condition by either the dermal or the intradermal method, or in which close questioning did not elicit a definite history of itching of the mucous membranes of the eye, nose, roof of the mouth, posterior pharynx or eustachian tubes. One hundred and seventy were uncomplicated cases; 157 were primarily perennial hay-fever cases complicated with asthma, and in 114 asthma was the predominating feature but a definite perennial hay-fever condition existed. Twenty-nine gave a bilateral family history; 240, a unilateral family history, and 172 gave a negative history of allergy in the family. One hundred and fifty-seven were complicated with asthma; in twenty-eight, hives were associated with the perennial hay-fever; in thirty-six, eczema; in seventeen, migraine. The dermal test in seasonal hay-fever was found to be quite satisfactory in about 90 per cent of the cases, but as a means of determining the etiologic factor in asthma and perennial hay-fever the dermal test alone has not proved successful. Of the 441 cases studied, 362 gave a positive reaction, on intradermal testing, to one or more pollens, while only 207 reacted to pollen by the dermal method. There were 369 patients who reacted to animal dander by the intradermal method, compared with 104 by the dermal. One hundred and twenty-six showed a positive reaction to orris root by the intradermal method, compared with forty-four with the dermal. The dermal method was not used in testing with house dust, but the intradermal method was used as a routine in applying the house dust test and 143 cases were found sensitive. Except for wheat, milk and eggs, the intradermal method was not used in food testing. There were fifty-eight who were found sensitive to one or more of these three foods. One hundred and seven proved positive to some food by the dermal method. Three distinct measures must be used in the treatment of the average case of perennial hay-fever: first, elimination; second, education; third, desensitization. Of the 441 cases studied, excellent results were obtained in eighty, good results in 270, fair results in seventy-nine and poor results in twelve. Balyeat concludes that at least 80 per cent of patients suffering from perennial hay-fever have been misdiagnosed and treated for primary nasal disease or some other condition. Many of these patients have had much needless surgery done on them.

Southwestern Medicine, Phoenix, Ariz.

13: 153-200 (April) 1929

Thoracoplasty and Ancillary Operations. F. P. Miller, Los Angeles.—p. 153.
Practitioner and Diagnosis of General Paresis. N. H. Brush, Santa Barbara, Calif.—p. 157.
Peptic Ulcers and Associates. F. A. Speik, Los Angeles.—p. 160.
Complications of Pott's Fractures. D. W. Crile and A. Spelman, Chicago.—p. 163.
Cortical Abscess of Kidney. V. C. Hunt, Rochester, Minn.—p. 166.
Addison's Disease: Two Cases Treated by Muirhead Régime. R. J. Groom, Santa Rita, N. M.—p. 169.

Tennessee State M. Assoc. Journal, Nashville

21: 451-516 (April) 1929

Retrospect. K. S. Howlett, Franklin.—p. 451.

Texas State J. Medicine, Fort Worth

24: 813-900 (April) 1929

Advantages of Combined Anesthesia in Gynecology. I. E. Pritchett, Houston.—p. 824.
Management of Dystocia in China. A. C. Hutcheson, Houston.—p. 826.
Comparison of Physical and Roentgen Findings in Pulmonary Tuberculosis. J. W. Laws, El Paso.—p. 830.
*Cesarean Section, Procedure of Choice. N. Davis, Houston.—p. 833.
*Natural and Acquired Body Resistance to Neoplasia. J. L. Goforth, Dallas.—p. 835.
Intranasal Operation for Chronic Maxillary Sinusitis. J. B. Nail, Wichita Falls.—p. 839.
*Anomaly of Cranial Cavity. J. J. Crume, Amarillo.—p. 842.
Magnetic Intraocular Foreign Bodies. W. Lapat, Houston.—p. 843.
Industrial Hygiene in Public Health. L. H. Martin, Fort Worth.—p. 847.

Roentgen Visualization and Clinical Evaluation of Wisdom Teeth. D. Richardson, Austin.—p. 849.
Bone Sarcoma Treated by Roentgen Ray. G. E. Henschen, Sherman. —p. 852.
Some Tumors Occurring at Base of Brain. P. Brindley and H. Hartman, Galveston.—p. 853.

Cesarean Section, Procedure of Choice.—Davis states that in the city of Houston, from 1923 to 1926, there were 107 cesarean sections done at two hospitals. The patients came from the private practice of the general practitioners, general surgeons and obstetricians of the city. The mortality in these operations was 14.4 per cent. Fifty-one per cent of the 107 patients were operated on by a group of recognized surgeons and physicians in general practice, with a mortality of about 33 per cent. Another small group, composed of physicians specializing in obstetrics, and of surgeons closely associated with them, performed fifty-six consecutive cesarean sections with a mortality of 1.8 per cent.

Natural and Acquired Body Resistance to Neoplasia.—An analysis of the relationship that exists between host and neoplasm is presented by Goforth. The reactions of certain body tissues to neoplastic growth constitute the host's natural resistance to neoplasia. Some of these reactions can be influenced therapeutically. The activities and behavior of the several tissues playing rôles in the body protective mechanism to neoplasia, are evaluated as follows: (*a*) The proliferation of fibroplastic tissue about the advancing edge of many neoplasms tends to limit and obstruct the progress of the growth. Radiotherapy stimulates the activity of the defense factor. (*b*) The antagonism of the reticulo-endothelial system to neoplasia is discussed. The possibility of influencing endotheliocytes therapeutically in the attack on neoplasia is suggested. (*c*) Lymphocyte and plasma cell infiltration of and about tumor tissue tends to inhibit the extension of the neoplasm and the secondary infection that is often present. (*d*) The eosinophil is a valuable index to prognosis in addition to its being an important defense agent against neoplasia.

Anomaly of Cranial Cavity.—Crume relates the case of a woman who stated that she had had mastoiditis in 1921, with recovery, and another attack of mastoiditis in 1925, with only partial recovery. Since then she had continued to have some pain and slight tenderness over the tip of the mastoid bone. She gave no history of ever having had purulent otitis media. The roentgenogram showed a condition in the occipital region, just back of the mastoid, which was suggestive of intracranial abscess. The mastoid cells were clear on transillumination. When Crume operated, he found nearly all of the cells obliterated. The bone was extremely hard. No pus or granulation tissue was found, and no sinus leading from the mastoid cells to what he had thought might be a brain abscess. An absolutely empty cavity, about 2½ inches (63 mm.) in diameter, was found. Crume's theory is that at some previous date an injury was received causing a fracture of the skull which produced an intracranial hemorrhage. The blood clot became encapsulated and was finally absorbed, leaving the capsule as shown in the roentgenogram. The patient returned home in a few days after the operation, and the last report from her was that she was much improved, and greatly relieved of the pain from which she had so long suffered.

U. S. Veterans' Bureau M. Bull., Washington, D. C.

5: 323-406 (May) 1929

Method of Standardization of Treatment, Technic and Procedure in Veterans' Hospitals. J. R. McDill.—p. 323.
Organization of Medical Staff and System of Staff Conferences. H. C. Sharp.—p. 328.
*Tryparsamide and Mercury Treatment of Neurosyphilis. M. B. Holmes. —p. 335.
Progressive Muscular Atrophy. R. E. Davis and A. G. Dumas.—p. 338.
Tuberculosis of Slight and Intermittent Activity. N. Barlow.—p. 345.
Tuberculous Diabetic: Five Cases. J. S. Sprague.—p. 348.
*Barbital Toxicosis: Three Cases. R. A. Gunter.—p. 351.
Effect of Inactivation of Serum on Syphilitic Antibody. B. S. Levine. —p. 353.
Gonorrheal Endocarditis. B. B. Edwards.—p. 360.
*Control of Secondary Hemorrhage Following Extraction of Teeth. C. R. Hillier.—p. 364.
Library Activities in Diagnostic Center. R. E. Rodier.—p. 367.
Tuberculous Abscess of Brain with Subdural Erosion Involving Parietal Bone. G. E. Leontine.—p. 371.
*Palilalia: Uncommon Symptom of Encephalitis Lethargica. J. H. Baird. —p. 374.
Simultaneous Bilateral Spontaneous Pneumothorax. J. L. Donahue. —p. 376.
Acute Nephritis, with Hemorrhage and General Edema. G. H. Parmenter.—p. 379.
Treatment of Flat Feet by Physical Therapy. F. A. Bardwell.—p. 386.
Methods of Administering Occupational Therapy. F. M. Rogers.—p. 388.
Occupational Therapy in Labrador. E. C. Dana.—p. 392.

Tryparsamide and Mercury Treatment of Neurosyphilis.—From Feb. 1, 1927, to Oct. 1, 1928, 5,651 intravenous treatments were administered by Holmes to 107 patients. The report is confined to sixty-seven of these patients who had two or more spinal fluid examinations; fifty-two have been on treatment from one to two years, and fifteen more than six months. As far as possible the spinal fluid and the blood Wassermann reaction were studied every six months. The treatment was individualized as much as seemed practicable. In general the blood Wassermann reaction was little affected by treatment with tryparsamide and mercury only. Patients who were given alternating treatment with neoarsphenamine and tryparsamide followed by a course of mercury responded more readily. The spinal fluid globulin was slow to change. It seemed to be the most persistent pathologic finding. The cell count was modified more readily. Of sixty-two cases, forty-one showed improvement. The spinal fluid Wassermann reaction was materially modified in thirty of the cases and slightly modified in another seventeen. The remaining twenty did not show improvement. The colloidal gold curve was modified in forty-three of sixty-seven cases, the modification beginning in the first zone, the curve approaching the tabetic type of curve. Clinically, almost all the patients improved in general health. Some gained as much as from 25 to 30 pounds (11 to 13.6 Kg.). Quite a few maniacal reactions were observed when 3 Gm. of tryparsamide was used, but this probability was materially lessened when 1.5 Gm. was given at more frequent intervals. Three patients complained of eye symptoms, but it is felt that only one of these actually was adversely affected by tryparsamide treatment. From a mental standpoint, thirty-nine showed little or no improvement, and forty showed moderate to marked improvement. Of eleven intrahospital deaths, autopsy was performed in nine cases. The serologic and clinical improvement correlated fairly well on the whole group studied; however, some cases showing marked clinical improvement showed little serologic improvement and vice versa.

Barbital Toxicosis.—Gunter reports three cases of advanced active pulmonary tuberculosis in which even small doses of barbital caused toxic manifestations.

Control of Secondary Hemorrhage Following Extraction of Teeth.—Under local anesthesia, Hillier reams out the bleeding tooth socket lightly, the object being to sever and twist the bleeding vessel. Next a small crystal of silver nitrate is placed and held against the tissue lacerated by the burr. This is allowed to remain for about one fourth of a minute, after which the area is washed with a strong sodium chloride solution. After this the socket is tightly packed with half-inch gauze.

Palilalia: Uncommon Symptom of Epidemic Encephalitis.—The posture, gait and other neurologic signs in Baird's case were pathognomonic of the parkinsonian syndrome of epidemic encephalitis. In addition the patient manifested a rather unique speech phenomenon. He repeated a number of times nearly all the answers to questions asked. For instance, the query "What would you like to do?" brought forth "I want to go home, I want to go home, I want to go home, want to go home, want to go home," the utterances being in rapid succession and the volume of sound growing less and less in diminuendo fashion. The number of repetitions was usually five, but often there were but three, and now and then seven or eight. When the answers to a question involved more than one sentence, the patient would play on the last sentence of the discourse or only a part of the last sentence. The phenomenon would tend to diminish during long conversation, but following a period of rest it would reappear. There was never any senselessness in any of the patient's statements or in the repetitions, so that the phenomenon cannot be regarded as true verbigeration. The patient was perfectly cognizant of this peculiarity of speech but was entirely unable to rid himself of it.

FOREIGN

An asterisk (*) before a title indicates that the article is abstracted below. Single case reports and trials of new drugs are usually omitted.

Archives of Disease in Childhood, London

4: 67-110 (April) 1929

Purulent Pericarditis Following Acute Osteomyelitis of Femur: Case. T. M. Thomas.—p. 67.
*Levulose Test in Rheumatic and Choreal Children. M. J. Brown.—p. 76.
*Pneumonia in Childhood: II. Alveolar (Lobar) Pneumonia. C. McNeil, A. R. MacGregor and W. A. Alexander.—p. 83.
Estimation of Phase of Disease in Rickets. O. MacRae.—p. 95.
*Enuresis in Hospital Practice. K. M. Horton.—p. 105.

Levulose Test in Rheumatic and Choreal Children.—The levulose test was performed by Brown in nineteen children who were suffering from convalescent rheumatic fever with definite cardiac involvement, and of these only three showed a rise in the blood sugar of more than 30 per cent after the ingestion of levulose. One case of severe cardiac disease, with definite clinical and pathologic evidence of liver derangement, showed in addition to an abnormal rise in the blood sugar a delay in the return to the fasting level. Of five cases of active chorea in which there was no evidence of cardiac involvement, two showed a rise in the blood sugar content of more than 30 per cent after the ingestion of levulose, and of twelve cases of active chorea with definite cardiac disease, two showed an abnormal rise in the blood sugar after the ingestion of levulose. In six cases of convalescent chorea, three of which showed evidence of cardiac disease, a normal blood sugar curve was obtained. Of thirty-two cases of rheumatic cardiac disease only four (12 per cent) showed an abnormal rise after the ingestion of levulose; whereas of nine cases of the rheumatic infection without heart disease, three (33 per cent) showed an increase in the blood sugar of more than 30 per cent. The levulose test does not give any consistent evidence of liver derangement in the rheumatic infection.

Pneumonia in Childhood.—Twenty-three cases are analyzed by McNeil et al. The incidence of serious complications was very high in this series. In fifteen of the twenty-three cases the pneumonia was accompanied by some complicating condition (either resulting directly from the pneumonic infection or preexistent), which greatly increased the gravity of the illness, and was in some instances certainly the actual cause of death. The nature and frequency of these complications were as follows: empyema, eight; pericarditis, three; meningitis, three; abscess in lung, three; peritonitis, one; acute nephritis, one; suppurative pyelonephritis, one; congenital defect of the heart, one. The features of alveolar pneumonia to which special importance is attached in distinguishing it from confluent bronchopneumonia are the following: the localization of consolidation to a certain definite area; the absence of generalized bronchitis; the absence of anything more than a very trivial inflammation of the bronchi within the pneumonic area; the freedom of the bronchial and alveolar walls and stroma generally from injury by infiltration with inflammatory cells. The study of this postmortem material supports the view widely held on clinical grounds that this type of pneumonia is not uncommon in the first two years of life. Atypical forms of alveolar pneumonia in children are briefly discussed. Short clinical and postmortem reports of three cases of alveolar pneumonia, two of them in infants under 1 year, are presented. In this study, paraffin sections of entire lungs have been used. Illustrations of these are given.

Enuresis in Hospital Practice.—In this series of sixty cases reviewed by Horton, the incidence of enuresis was greater among girls than among boys and the majority of cases occurred after control of micturition had been established. A family history occurred in 56.6 per cent of cases and the symptoms of nervous instability were alone prominent. Nearly 50 per cent of these children did not have any physical abnormality and only one case of phimosis occurred. The group in which enuresis occurred by day and night was the commonest type. The children were in most cases nervously unstable, highly strung persons, abnormally sensitive to praise or blame, which would account for the relatively large proportion of cases in which incompatibility with the home was found. All cases responded relatively quickly to the combination of simple suggestive measures with the giving of belladonna. Reference to the notes of thirty cases distinct from this series shows that when no definite insistence on simple psychologic treatment was made in addition to the giving of adequate doses of belladonna, or when only small doses of belladonna were given, the children remained in statu quo for varying periods of from one to twelve months.

Brain, London

52: 1-126 (April) 1929

Hepatolenticular Degeneration. S. Barnes and E. W. Hurst.—p. 1.
*Form of Myasthenia Gravis with Changes in Central Nervous System. D. McAlpine.—p. 6.
*Arteriosclerotic Parkinsonism. M. Critchley.—p. 23.
Progressive Hypertrophic Polyneuritis of Dejerine and Sottas: Case. R. S. De Bruyn and R. O. Stern.—p. 84.
Relapsing Interstitial Hypertrophic Polyneuritis: Case. W. Harris and W. D. Newcomb.—p. 108.

Form of Myasthenia Gravis with Changes in Central Nervous System.—A case of myasthenia gravis is described by McAlpine in which inflammatory changes in the spinal cord with widespread mucocytic degeneration were found. The possibility of an occasional relationship between myasthenia gravis and epidemic encephalitis is considered.

Arteriosclerotic Parkinsonism.—Critchley draws attention to a variety of parkinsonism due to cerebral arteriosclerosis. By isolating an arteriosclerotic variety, support is given to the conception of parkinsonism as a syndrome that may occur under numerous pathologic circumstances. It is the site, rather than the nature of the disease, which produces the characteristic clinical picture.

British J. Dermat. & Syphilis, London

41: 177-220 (May) 1929

*Paget's Disease of Vulva. J. A. Drake.—p. 177.
Hyperkeratosis Palmaris Et Plantaris Associated with Ainhum-Like Constriction of Fingers: Case. J. E. M. Wigley.—p. 188.
*Molluscum Contagiosum and Turkish Baths. C. G. Crowley.—p. 192.

Paget's Disease of Vulva.—Drake asserts that his case is the fifth to be recorded in the literature. The patient, aged 68, stated that the condition had been coming on gradually during the past eight years, and was noticed first after treatment for piles by a method of injection.

Molluscum Contagiosum and Turkish Baths.—Crowley reports three cases seen within two days. All conformed to the typical picture. Distribution in each case was on the chest and abdomen. Each of the three patients was asked the usual question, whether he had been taking Turkish baths a week or so before the eruption appeared, and all answered that this had been their practice. Moreover, it was further elicited that the same baths had been attended by each patient.

British Medical Journal, London

1: 797-838 (May 4) 1929

Some Modern Aspects of Nephritis. W. L. Brown.—p. 797.
*Macropolycyte. W. E. Cooke.—p. 800.
Cancer and General Practitioner. C. Rowntree.—p. 804.
*Extra-Uterine Gestation at Term with Healthy Baby. A. M. Richards.—p. 807.
Radioscopic Diagnosis of Filariasis. J. B. Christopherson.—p. 808.
Differential Diagnosis of Sputum in Chronic Lung Infections. P. J. Marett.—p. 808.
*Treatment of Septic Hands and Feet on Shipboard. R. A. Newsom.—p. 809.
Hemoperitoneum Due to Spontaneous Rupture of Splenic Vein. L. N. Pyrah, F. R. Stansfield and H. G. Garland.—p. 810.
Appendicitis Caused by Bilharzia. H. E. Harris.—p. 810.
Abdominal Torsion of Omentum. A. Ronald.—p. 811.

Macropolycyte.—While not denying that the megakaryocyte may be found in the blood stream, Cooke believes that its presence must be extremely rare. He has never seen, in blood films, a cell that faithfully resembled the multinucleated giant cell of the marrow. There is every probability that the vast majority of the so-called megakaryocytes found in blood films belong to one or the other class of macropolycyte. The term macropolycyte is applied as a descriptive title to the large or giant polymorphonuclears having a diameter of more than 14 microns. The macropolycyte found in health and in infections does not have any diagnostic or prognostic significance, and it is due to the accidental prolongation of the lifetime of a neutrophil polymorphonuclear leukocyte.

Extra-Uterine Gestation at Term with Healthy Baby.—In the case reported by Richards neither the symptoms nor the signs during pregnancy were sufficiently pronounced to suggest the diagnosis of extra-uterine gestation. The diagnosis was not made until the operation was in progress. The placenta was attached to the left cornu of the uterus and the left broad ligament. The baby was a full-term girl, well formed, and weighing 6 pounds 6 ounces (3 Kg.) at birth. Contrary to the usual observations in such cases, the child was not deformed.

Treatment of Septic Hands and Feet on Board Ship.—The general routine treatment employed by Newsom was to open up the abscess with an incision at least from 1 to 1½ inches in length, make no attempt to prevent bleeding, and then plunge the septic limb into a hot iodine bath (1 drachm, or 4 Gm., of tincture of iodine to a pint of hot water). A gauze dressing soaked in hydrogen dioxide was then applied and a bandage was tied well above the wound. The patient was instructed to return the next day, or later in the same day, if the infection appeared acute, when the dressing would be soaked off in another iodine bath and a dressing of glycerin and magnesium sulphate (equal parts) on lint or gauze applied. These dressings would be repeated three times a day for the first two days, each dressing being soaked off in a hot iodine bath, and then twice a day until the wound appeared clean and no pus was apparent, when a dry dressing of iodoform powder on lint was employed. In every case, once an incision large enough to allow the pus to escape had been made, the wound was touched as little as possible. No attempt was made to express pus by squeezing, but the patients were encouraged to move the affected limbs themselves while they were soaking them in the bath.

1: 839-890 (May 11) 1929

Tuberculosis and Nervous System. F. Buzzard.—p. 839.
*Treatment of Carcinoma of Cervix with Radium. G. I. Strachan.—p. 842.
*Technic of Intra-Abdominal Insertion of Radium for Carcinoma of Cervix Uteri. M. Donaldson. —p. 844.
Radium Teletherapy: Experience with Temporary "Bomb." F. R. Carling.—p. 845.
Early Exophthalmic Goiter. J. H. Hannan.—p. 848.
Thoracoscopy and Cauterization. B. Hudson and G. Maurer.—p. 849.
Treatment of Influenzal Pneumonia by Convalescent Serum. A. M. Ferrie and D. E. Morley.—p. 849.
Fibroma of Urinary Bladder. R. Maingot.—p. 850.
Pregnancy Following Amputation of Cervix. H. W. Davis.—p. 850.

Treatment of Carcinoma of Cervix with Radium.—Strachan reviews his experiences with radium in these cases. It has been very satisfactory, although the majority of patients died at varying intervals. An important feature in the successful use of radium is the amount of relief obtained from the distressing symptoms of uterine hemorrhage, foul discharge and pelvic pain, and it is the author's opinion that even if life were not prolonged by a day irradiation would be justified in its use for this reason. No patient died as the result of irradiation.

Radium for Eradication of Carcinoma of Cervix Uteri.—Donaldson feels that since radium will entirely eradicate carcinoma in the cervix and vagina it is logical to try to extend the influence of the radium to the growing edge of the tumor by means of intra-abdominal radium. The cases so far treated show that this method is not attended by any undue risk to the patient, and the small series treated in 1923-1924 show sufficiently good results to justify investigating further this line of treatment.

Journal of Coll. of Surgeons of Australasia, Sydney

1: 284-444 (March) 1929

Abnormalities of Hind End of Body. J. L. McKelvey.—p. 285.
Endometriosis. E. S. J. King and J. Fiddes.—p. 303.
Secondary Echinococcosis. H. Dew.—p. 337.
Hydatid Disease in New Zealand: Prevalence and Prevention. L. E. Barnett.—p. 351.
Use of Tape Measure in Diagnosis. R. H. Russell.—p. 365.
Difficult Appendicectomy. H. B. Devine.—p. 375.
*Urethrovesicovaginal Fistula: New Operation for Restoration of Urethra. S. H. Harris.—p. 390.
Community Hospital: Application to Australasia. T. Hamilton.—p. 396.
Demonstration of Pathologic Specimens. L. Utz.—p. 402.
Senior Surgical Qualifications. G. Syme.—p. 409.

New Operation for Restoration of Urethra.—The operation described by Harris is a modification of an old and discarded operation for penile hypospadias. In the female the operation provides for a good body of tissue between the new urethral tube and the surface, and all sutures are easily tied without tension. Healing by first intention should be the rule and ensued in three patients operated on by Harris.

Journal of Hygiene, London

29: 1-116 (April) 1929

*Antirabies Immunization. G. Stuart and K. S. Krikorian.—p. 1.
Bacteriologic Studies of Milking Machines. C. K. Johns and A. G Lochhead.—p. 35.
Outbreak of Alleged Ergot Poisoning by Rye Bread in Manchester. M. T. Morgan.—p. 51.
Bacteriologic Control of Shellfish. J. W. Bigger.—p. 62.
*Shaw-Mackenzie Test for Cancer. E. Watchorn.—p. 71.
Alterations in Endogenous Enteric Bacterial Flora and Microbic Permeability of Intestinal Wall in Relation to Nutritional and Meteorologic Changes. L. Arnold.—p. 82.

Antirabies Immunization.—The vaccine employed by Stuart and Krikorian is a 2 per cent emulsion of fixed virus brain, killed by the combined action over twenty-four hours of heat at 37 C. and of 1 per cent phenol, prepared according to their own process and diluted to half strength with physiologic solution of sodium chloride prior to use. The question of safety to life, then, is foreclosed by the employment of a dead phenolized virus; the adoption of such a method places antirabies inoculation and procedure on the simple basis of ordinary vaccine therapy; decentralization of treatment, as practiced in Palestine, is made possible; the interests of economy and utilitarianism are alike consulted. Further, the extreme rarity of paralytic accidents complicating treatment with killed phenolized virus may be gaged from the fact that up to, and including the present, there are on record only five cases out of 91,637 cases treated. The efficacy of killed phenolized vaccine and probably of other antirabies vaccines is largely dependent on the concentration of the dosage and the period within which it is administered. Better results follow the giving of small doses over a number of days than the giving of larger doses over a shorter period.

Shaw-Mackenzie Test for Cancer.—Two hundred serums have been examined by Watchorn by means of the Shaw-Mackenzie test for cancer. In seventy-one cases of malignant growths the test was positive in forty-nine, doubtful in five and negative in seventeen. Epitheliomas of the skin all gave negative results, and some cases which had been treated with lead, roentgen rays or radium, and some cases of advanced inoperable carcinoma in old people also showed negative results. In 102 cases of various diseases other than growths (malignant or otherwise), negative results were otained in sixty-five cases while nineteen were doubtful and eighteen were definitely positive. The chief conditions likely to give wrong positive reactions are venereal disease, heart disease, nephritis, pulmonary tuberculosis, pregnancy and menstruation. A 1 per cent solution of choline hydrochloride gave results similar to those obtained with the carcinoma extract.

Lancet, London

1: 963-1016 (May 11) 1929

Disorders of Movement. F. M. R. Walshe.—p. 963.
Juvenile Behavior Disorders in Epidemic Encephalitis. T. R. Hill.—p. 968.
Primogeniture: Is It a Factor in Production of Developmental Anomalies? M. T. Macklin.—p. 971.
Menace of Appendicitis. H. H. Greenwood.—p. 973.
Treatment of Middle Ear Suppuration by Ionization. J. D. McLaggan.—p. 975.
*Treatment of Ulcers of Leg with Magnesium Sulphate. J. H. Young.—p. 976.

Treatment of Ulcers of Leg with Magnesium Sulphate.—Young reports that the use of magnesium sulphate solutions in the treatment of ulcers of the leg has resulted in healing in more than 80 per cent of cases. The patients were all confined to bed with the foot of the bed elevated. Soaks of a 5 to 10 per cent solution of magnesium sulphate were applied and the dressing was renewed thrice daily. A considerable number of similar and varicose ulcers were treated in the same fashion with excellent results.

1: 1017-1072 (May 18) 1929

Cancer of Colon. G. G. Turner.—p. 1017.
Physiologic Analyses of Disorders of Movement: Tremor-Rigidity Symptom Complex. F. M. R. Walshe.—p. 1024.
*Time of Day in Relation to Convulsions in Epilepsy. M. Langdon-Down and W. R. Brain.—p. 1029.

Excitability of Respiratory Center of Psychotic Patients. R. G. B. Marsh.—p. 1032.
*New Index of Intestinal Putrefaction. N. Mutch.—p. 1034.
*Intranasal Immunization Against Scarlet Fever. B. A. Peters and S. F. Allison.—p. 1035.
Retention Apparatus for Anesthetic Masks. R. J. Clausen.—p. 1035.

Time of Day in Relation to Convulsions in Epilepsy.—Langdon-Down and Brain have subjected to detailed analysis the time incidence of the major fits in a group of sixty-six epileptic patients, living under similar conditions in the same institution, the hour of every major fit of each person, 2,524 fits in all, being recorded over a period of six months. All but five of the sixty-six patients were examples of so-called idiopathic epilepsy; that is to say, they did not present any clinical evidence of organic disease of the nervous system. Four of the remaining five patients had hemiplegia and in one epilepsy had supervened on a fracture of the skull. Approximately two thirds of the group of sixty-six epileptic patients manifested a marked difference in the diurnal and the nocturnal incidence of their convulsions, and approximately three-fifths exhibited one or more "time peaks," that is, a concentration of their attacks at or around certain hours. Five such peaks have been recognized, two nocturnal and three diurnal. The second nocturnal peak (maximum 3-4 a. m.) is the most frequent and was found in 35 per cent of patients; the first nocturnal peak (maximum 9-10 p. m.) occurred in 18 per cent. These two peaks were found together in 13.5 per cent; the first nocturnal peak occurred alone in 4.5 per cent, and the second alone in 21.2 per cent. The principal diurnal peak, D1 (maximum 7-8 a. m.), occurred in 24.2 per cent of patients.

New Index of Intestinal Putrefaction.—To 50 cc. of urine Mutch adds 5 cc. of 25 per cent sulphuric acid and extracts by shaking with 15 cc. of ether; 2 cc. of the ether is poured into a dry tube and evaporated by dipping into hot water. The residue is taken in 2 cc. of water. Millon's reagent is added drop by drop and boiled. A positive reaction is indicated by red coloration. The suggestion is made that a positive finding should be regarded as evidence of serious absorption of bacterial products from the colon or small intestine.

Intranasal Immunization Against Scarlet Fever.—Peters and Allison investigated the possibility of producing immunity to scarlet fever by the application of scarlet fever toxin to the nasal mucous membrane. The method employed was to spray the nose every other day by means of an atomizer with the scarlet fever toxin. The nose is first sprayed with a solution of 1 per cent sodium taurocholate with the aim of aiding absorption. During one period of the investigation this preliminary was omitted and decidedly inferior results followed. As the average time in the hospital of diphtheria patients is five weeks, the authors retested at the end of that time those who had been sprayed. Nine of those who still gave positive results were retested a fortnight later. The authors suggest spraying twice a week for eight weeks. This method is free from the objections of inoculation and does not produce any observable effects on the patient, except the development of immunity in a considerable proportion of cases.

1: 1073-1126 (May 25) 1929

Cancer of Colon. G. G. Turner.—p. 1073.
*Experimental Treatment of Cancer with Tuberculin. R. Pearl, A. C. Sutton and W. T. Howard, Jr.—p. 1078.
*Congestive Heart Failure. K. S. Smith.—p. 1080.
Nevus Undergoing Malignant Degeneration: Fatal Case. P. C. Fenwick and J. R. Wells.—p. 1085.
"Celiac Affection": Idiopathic Steatorrheas. T. E. H. Thaysen.—p. 1086.
Development of Experimental Oil and Tar Tumors in Mice. C. C. Twort and J. M. Twort.—p. 1108.

Experimental Treatment of Cancer with Tuberculin.—Pearl et al. report on their experiences with tuberculin in the treatment of six cases of carcinoma of the breast, stomach and rectum and one case of fibrosarcoma of the chest wall—some recurrent cases, some inoperable and some failing to receive benefit from other treatment. The tuberculin used is a bouillon filtrate from human strain 37. The tuberculin is injected subcutaneously. The dosage and interval are regulated according to the sensitivity of each patient, as determined by intracutaneous test with old tuberculin. There appears always to be a definite reaction in the tumor involvement, wherever located in the body, following each injection of tuberculin. Experience indicates that during the first six weeks of treatment the dosage should be kept low. At the end of about that period there usually appears a definite change for the better in the patient's condition, although up to that time little in the way of definitely observable results of the treatment is to be seen. After the first six weeks the dosage may be cautiously increased, and this appears from present experience to be advisable. But at all times great caution must be exercised, or the patient may be killed, either by the too rapid production of toxic products from the alterations induced in the tumor tissue, or from something closely resembling allergic shock. The evidence which has so far been accumulated does not warrant any positive conclusion whatever regarding the ultimate therapeutic value of tuberculin in the treatment of cancer. The results which have been obtained are sufficiently promising to warrant the continuation of the investigation.

Congestive Heart Failure.—An analysis made by Smith of 105 patients with congestive heart failure shows that only eighteen escaped severe or incidental pain and discomfort. Pain was the primary complaint of six patients, while sixty-seven experienced this symptom in addition to others more urgent. In fourteen of the 105 patients the pain and discomfort arose from other structures than the heart. Pain and discomfort due to complications or sequelae of failure were found to be mostly pulmonary, pleural, hepatic or gastric. Edema, thrombosis and esophageal obstruction were also observed as causes of pain. Pain of cardiac origin in congestive failure may be classified as: (*a*) the sternal pain of early failure; (*b*) the pain of established failure. Sternal pain occurred at the onset of failure in thirteen of the twenty-nine cases analyzed. It was always provoked by exertion and rapidly relieved by rest. Reasons are given for believing this pain to be a very mild degree of angina pectoris. The presence or absence of hyperalgesia and superficial tenderness was investigated in thirty-three cases. Only three patients experienced hyperalgesia, while superficial tenderness was present in fourteen. It was found that hyperalgesia and superficial tenderness were more apt to occur when the heart was much enlarged or beating rapidly. The causes of pain in established failure are considered under the following heads: exertion, cardiac rhythm, the rate of the heart, intracardiac tension and cough. Factors relieving the pains and discomfort of failure are principally, rest, the establishment of failure, hemoptysis and therapeutic measures.

South Africa M. Assoc. Journal, Cape Town

3: 177-208 (April 13) 1929

*Etiology of Epidemic Influenza and Secondary Pneumonia. S. Lister.—p. 179.
Recent Work on Thyroid Gland. C. F. M. Saint.—p. 182.

Etiology of Epidemic Influenza and Secondary Pneumonia.—Lister believes that the cause of "colds," some catarrhs, and in all probability influenza will ultimately be found to be filtrable viruses, which will thus be linked up as the primary factor in many secondary pneumonias.

Tubercle, London

10: 353-400 (May) 1929

Pulmonary Asbestosis. W. B. Wood.—p. 353.
*Sedimentation Rates in 252 Cases of Pulmonary Tuberculosis. R. R. Trail.—p. 363.

Sedimentation Rates in 252 Cases of Pulmonary Tuberculosis.—A study was made by Trail of the sedimentation rate of 200 T. B. + cases (tubercle bacillus present in sputum) and fifty-two T. B. — cases (tubercle bacillus absent in sputum). Of T. B. + cases with a sedimentation rate up to 20 per cent practically 70 per cent attain arrest or improvement with T. B. — sputum within a period of roughly four months of the ordinary routine treatment of the sanatorium. Of T. B. + cases with a sedimentation rate of more than 20 per cent, practically 70 per cent are only improved and still T. B. +, or remain stationary or become worse under similar conditions. Of T. B. — cases 90 per cent of those with a sedimentation rate up to 30 per cent attain arrest or improvement in this period. Of T. B. — cases with a sedimentation rate of more than 30 per cent, practically 30 per cent remain stationary or become worse. This review strengthens the conclusion that the test is a valuable indication to response to treatment and to prognosis under ordinary sanatorium routine.

Bulletins et Mém. de la Soc. des Chirurgiens de Paris

21: 225-264 (March 15) 1929

Isolated Tuberculosis of Mesenteric Lymph Nodes. V. Planson.—p. 227.
Roentgen Therapy in Gynecology. Séjournet and R. Bonneau.—p. 229.
*Revitalization by Means of Chemical Sympathectomy on Genital Glands. Doppler.—p. 232.
Fracture of Pelvis, with Rupture of Bladder. Duval.—p. 242.
Surgical Treatment of Posttraumatic Diffuse Meningo-Encephalitis. P. Peugniez.—p. 245.
Extradural Abscess of Auricular Origin, Without Otitis. Gasne.—p. 249.
Impacted Fracture of Neck of Femur. Brodier.—p. 251.
Torsion of Oviduct. Haller.—p. 253.
Indications for Vaginal Hysterectomy. Victor-Pauchet.—p. 256.
Tuberculosis of Adnexa and of Appendix. P. Muller.—p. 259.

Revitalization by Means of Chemical Sympathectomy on Genital Glands.—Doppler used chemical sympathectomy in many patients with symptoms of precocious senility. After the exposure and scarification of the testes or of the ovaries, a 6 or 7 per cent solution of phenol was applied generously to and rubbed well into the gonads and the corresponding vessels until they became reddish gray. The recovery usually was uneventful, and the stimulating effect on the general vitality and the arrest of the evolution of the precocious senility in the patients were observed since the first weeks after the operation and they lasted for several years. The good results observed are explained by the increased activity of the endocrine glands, due to the hyperemia, and by the decreased sympathetic tonus, due to the destruction of the sympathetic nerve fibers by the phenol.

Journal d'Urologie Médicale et Chirurgicale, Paris

27: 193-272 (March) 1929

*Nonexistence of Ascending Infection of Kidneys. F. Musumeci Grasso.—p. 200.
Cystography (Technic). V. Raffo and A. Vallebona.—p. 216.
Intravesical Prolapse of Ureter. L. Strominger and A. Schapira.—p. 220.
Use of Magnesium Chloride in Urology. L. Phélip.—p. 227.

Nonexistence of Ascending Renal Infection.—According to the old conception of the pathogenesis of nephritis, it was caused by either a descending (through the blood) or an ascending (through the bladder and ureter) infection, the first type being characterized by lesions in the renal cortex, the other by lesions in the renal medulla. But Musumeci Grasso calls attention to the fact that usually lesions are found in both the cortex and the medulla of the kidney, and the prevalence of the pathologic changes in one or the other part of the kidney is determined by the virulence of the pathogenic micro-organisms, by the resistance of the kidney, and especially by the condition of the medullary papillae. Virulent pathogenic micro-organisms arriving with the blood stream first in the glomeruli produce pathologic changes in the cortex, whereas micro-organisms of an attenuated virulence pass through the glomeruli into the uriniferous tubules and are washed out by the urine, if the kidney and especially the medullary papillae are in good condition. On the other hand, if the kidney resistance is impaired by distention caused by chronic retention of urine, the micro-organisms are retained in the uriniferous tubules, increase in virulence and produce the medullary lesions that were formerly considered as characteristic for an ascending infection. Regardless of the origin of renal infection it is always descending (hematogenous). Ascending renal infection does not exist, because experiments and clinical observations show that the pathogenic micro-organisms from the infected bladder or ureters do not infect the kidney unless the desquamation of the epithelium of the urinary tract, caused by the retention of urine, allows them to pass into the general circulation (descending renal infection). If the rabbits with experimental infection of the bladder and retention of urine are killed before the desquamation of the bladder epithelium has started, the cultures of the blood, kidneys and other viscera are negative, whereas they are positive in the presence of desquamation of the bladder epithelium.

Presse Médicale, Paris

37: 545-568 (April 27) 1929

*Rôle of Skin in Treatment of Visceral Pain. J. A. Sicard and A. Lichtwitz.—p. 545.
Effect of Mineral Waters on Life of Vegetables. G. Billard and A. Mougeot.—p. 546.
*Desirability of Clinicophysiologic Study of Chronic Rheumatism. J. van Breemen.—p. 551.

Rôle of Skin in Treatment of Visceral Pain.—Sicard and Lichtwitz discuss the mechanism involved in the local intradermal or subcutaneous treatment of visceral pain. They reject the theory of the peripheral or the ascendent anesthetic action of cocaine, because not only anesthetic agents but even distilled water may check visceral pain on the condition that the corresponding skin area of the pain projection is well infiltrated. On the other hand, by section of the anterolateral white column of the spinal cord, performed experimentally by the authors, all pain below the site of the section was abolished. Therefore the authors explain the effect of intradermal injections by a local shock of the nerve endings, which is referred to the nerve centers in the lateral part of the spinal cord, through which also are transmitted the painful irritations from the viscera. If the referred shock is strong enough to inhibit the spinal nervous centers, the centripetal propagation of the painful irritation of the viscera is interrupted, does not reach the cerebral cortical centers, is not perceived by them and is not projected by them as a sensation of pain into the corresponding skin area (dermatome). Thus the pain is not felt.

Desirability of Clinicophysiologic Study of Chronic Rheumatism.—Van Breemen, secretary to the International League Against Rheumatism, thinks that whereas the pathologic anatomy of rheumatism has been thoroughly studied, especially in the German literature, the clinicophysiologic studies have not been so complete. Therefore, and to simplify the international discussion of rheumatism, the league deems it advisable to submit a plan for the uniform clinicophysiologic study of rheumatism in its four principal pathogenic factors: (1) focal infection; (2) rheumatic constitution, hereditary or acquired from sedentary life and overfeeding; (3) disturbances of the cutaneous circulation, and (4) external factors, social or atmospheric.

37: 569-584 (May 1) 1929

Use of Salt in Nephritis Diet. L. Blum, van Caulaert and Grabar.—p. 569.
*Primary Cerebral Rheumatism (Rheumatic Psycho-Encephalitis). R. Targowla.—p. 572.

Primary Cerebral Rheumatism.—Targowla reports a case of subacute psychosis characterized mainly by confusion and anxiety, in a woman, aged 29, with a history of two previous attacks of articular rheumatism. Hypertension of the cerebrospinal fluid, brisk tendon reflexes, slight mydriasis and sluggish pupillary reflexes were found at the examination of the nervous system. The psychosis developed without articular disturbances, but it was accompanied by toxic and infectious symptoms characteristic of rheumatism. The patient was pale and anemic with unstable pulse and tendency to tachycardia, excessive perspiration, occasional rises of temperature and slight hyperazotemia. Transient albuminuria, with perimalleolar edema, pericardial friction and dyspnea, without pulmonary disturbances, were observed during the course of the psychosis, which lasted for more than two months. Large doses of sodium salicylate were used subcutaneously for the treatment of the condition. In two more patients similar confusion and anxiety psychosis with concomitant cardiac and renal disturbances (mitral or aortic murmur, albuminuria) were observed by the author and treated with sodium salicylate. The author considered these cases examples of rheumatic encephalitis which developed as an equivalent for an attack of articular rheumatism.

Revue Française de Pédiatrie, Paris

5: 1-144. (Feb.) 1929

Diagnosis of Activity of Tuberculosis. E. Gorter.—p. 1.
Treatment of Empyema by Ethylhydrocupreine Hydrochloride (Optochin). P. Woringer.—p. 60.
*Abnormal Forms of Tuberculous Meningitis. M. Erlich and A. Festensztat.—p. 97.
*Purulent Meningitis. M. Erlich.—p. 103.
Iso-Agglutinins in the New-Born and in Nurslings. M. Francotte.—p. 109.

Abnormal Forms of Tuberculous Meningitis.—Erlich and Festensztat report three cases of abnormal forms of tuberculous meningitis in children, aged 4, 9 and 5, respectively. In the first case, the sudden onset, with high temperature, vomiting and cephalalgia, stiffness of the muscles of the back of the neck, opisthotonos and Kernig's sign, polymorphonuclear leukocytosis (81 per cent) in the turbid cerebrospinal fluid, and negative Pirquet reaction, suggested cerebrospinal meningitis, and 20 cc.

of antimeningococcic serum was injected intraspinally. A few days later, with the same polymorphonuclear leukocytosis, tubercle bacilli were found in the cerebrospinal fluid, which became even more turbid. The child died after a short time and diffuse tuberculous meningitis was found at necropsy. In the second case reported, the child, aged 9, complained only of pain and stiffness of the neck; the temperature was 39 C. (102.2 F.), but the general condition was good. One thought at first of arthritis of the cervical vertebrae; however, the child died in six days from tuberculous meningitis. In the third case of diffuse tuberculous meningitis in a child, aged 5, only recurrent attacks of jacksonian epilepsy were observed in the first few days of the disease. In this case also polymorphonuclear leukocytosis was found in the turbid cerebrospinal fluid.

Purulent Meningitis.—Erlich reports twelve cases of purulent meningitis in children, aged from several months to 6 years. In seven cases it was caused by meningococci and in five cases by other micro-organisms, such as pneumococci, streptococci or Pfeiffer's bacilli. The evolution of meningococcal purulent meningitis was less rapid (twelve days as compared with fifty-six hours in pneumococcal meningitis), and the symptoms did not appear as suddenly as in the cases of purulent meningitis. The cerebrospinal fluid was frankly purulent, whitish or yellowish in the meningococcal meningitis and grayish or greenish, only slightly turbid and almost never frankly purulent, in the other kinds of meningitis in which also numerous pathogenic micro-organisms were easily found in the cerebrospinal fluid from the beginning of the disease, whereas the meningococci were usually found with great difficulty. These distinctive features are considered by the author as valuable in the differential diagnosis of purulent meningitis.

Revue Médicale de la Suisse Romande, Lausanne

49: 249-312 (April 25) 1929

Lumbago (in Accident Insurance). D. Pometta.—p. 249.
*Future of Children with Mongolian Idiocy. N. Spühler.—p. 258.
*Calcium Therapy in Generalized Drug (Bromide) Dermatitis. R. S. Mach.—p. 286.

Future of Children with Mongolian Idiocy.—Spühler followed up sixty-eight children with mongolian idiocy, some of them since 1912. Forty-four per cent of the children died, almost all before the age of 6 years (50 per cent from pneumonia and 20 per cent from congenital heart disease). Of forty-eight patients who are still alive, 52 per cent are aged more than 10, and 10 per cent more than 20. Seventeen of them are in asylums, where they are not able to do even the simplest work to pay a part of their expenses. The mongolian characteristics and the muscular hypotonia diminished with age, but the retardation of the growth of the body and of the sexual development and the tendency to obesity became more accentuated. Their activities decreased more and more, they became apathetic, and their intellect never developed much: usually they could count up to ten, and only one patient, aged 18, could count up to 100. Only one patient, also aged 18, could read whole phrases slowly; some could read single words, and the rest of them could recognize only separate letters. Since the age of from 6 to 7 years they were oriented fairly well with regard to space but not to time: two patients, aged 18 and 25, knew the day, month and year at the day of the examination. Thus the prognosis in mongolian idiocy cannot be regarded as being promising.

Calcium Therapy in Generalized Drug (Bromide) Dermatitis.—Mach reports a case of generalized drug erythrodermia in a patient, aged 53, who was treated by intravenous injections of sodium bromide for a limited itching erythematovesicular skin eruption. The first injections were well tolerated and the itching decreased, but after the sixth injection a generalized erythema appeared, accompanied by desquamation resembling pemphigus foliaceus. For a long time the condition remained refractory to all kinds of treatment but it improved rapidly and was cured in about two months by prolonged intravenous calcium therapy. The case is interesting because of the unusual complication of the intravenous administration of bromides that has been widely used during the past few years for the treatment of pruriginous dermatitis and eczema, and was considered to be well tolerated.

Schweizerische medizinische Wochenschrift, Basel

59: 445-468 (April 27) 1929

Rubella and Glandular Fever. E. Glanzmann.—p. 445.
*Influence of Menstruation on Pulmonary Tuberculosis in Women. H. Alexander.—p. 454.
Influence of Institutional Environment on Development and Course of Diseases. Stroomann, Gerke, Kloiber and Geppert.—p. 457.
Infrequency of Cancer Among Primitive Races, Frequency Among Civilized Peoples. J. Fallscheer-Zürcher.—p. 459.
Roentgen Therapy of Tuberculosis of Tongue. A. Eghiayan.—p. 463.

Influence of Menstruation on Pulmonary Tuberculosis in Women.—Alexander asserts that during the premenstrual period most symptoms of tuberculosis increase in severity. He calls especial attention to the variations in the temperature curves. In 229 out of 300 patients a marked increase in temperature could be noted during the premenstrual period. In some cases the increase became noticeable from ten to fourteen days before the menstrual period, while in other instances it began only about five days before. The height of the temperature was in direct proportion to the severity of the tuberculous process. In some cases higher temperatures could also be noted during menstruation. In these instances the tuberculous process was likewise progressive. In seventy-one patients, menstruation seemed to have no influence on the temperature. Some of these patients had normal temperature curves, while others had constant subfebrile or febrile temperatures. In the latter patients the premenstrual increase of temperature could not be noted on account of the activeness of the pulmonary process, which in itself caused high temperatures. The author states that as yet it has not been definitely determined how these changes are produced. It is known that the thyroid has a certain influence on the body temperature, and although tuberculosis of the thyroid occurs comparatively seldom, the tuberculosis toxins have nevertheless a certain influence on this organ. It is also known that during menstruation the thyroid enlarges and then decreases in size again. Concerning the treatment, the author states that, if the thyroid is actually of influence in these conditions, it is not advisable to give thyroid preparations to those patients who show an increase in temperature during the premenstrual period. However, lime preparations might be helpful. In those instances in which the tuberculous process is so active that the temperature is constantly high, thyroid preparations might prove valuable. To eliminate menstruation temporarily by roentgen irradiation seems inadvisable. The author states that, in patients who had been treated in this manner, improvement in the tuberculosis could not be noted and the general condition became worse.

Pediatría Española, Madrid

17: 325-356 (Sept.) 1928

*Emetic Dyspepsia in Infants. S. Cavengt.—p. 325.
*Scarlatinal Angina: Its Treatment. S. Cavengt.—p. 340.

Emetic Dyspepsia in Infants.—Cavengt states that vomiting, either acute or subacute, in infants, is a clinical manifestation of great importance. It constitutes one of the most constant morbid phenomena of diseases of the digestive system. Habitual vomiting and pyloric stenosis have been considered, hitherto, as two different conditions of a completely diverse genesis. But the author is of the opinion that they are analogous diseases; therefore he proposes the name emetic dyspepsia to include both diseases. He reports two cases that occurred in infants, aged 5 and 10 months, respectively. In both cases it was believed at first that the mother's milk was not appropriate for the child, but careful testing in the first case proved that it was. Roentgenography two years later showed a normal stomach. The second infant had improved on water first, and then small amounts of cow's milk, but the mother did not adhere to this diet. Severe diarrhea developed and the child died. The diagnosis in both cases was emetic dyspepsia.

Scarlatinal Angina and Its Treatment.—The cases reported by Cavengt prove the danger of surgical intervention in scarlatinal angina. A child, aged 3, had had a severe attack of scarlet fever. The disease followed a normal course. During the first thirty-six hours the characteristic erythematous angina appeared. Both tonsils were enlarged and the posterior palatine region was congested and thickened. The impression

of developing abscesses led another physician to attempt to open these supposed abscesses. Fourteen hours after the operation, necrosis occurred. The author saw the patient at this time and at once resorted to serotherapy. He injected from 50 to 100 cc. of serum daily, but the child's condition continued to grow worse and it died.

Revista de Medicina y Cirugía de la Habana, Havana

33: 777-830 (Nov. 30) 1928. Partial Index

*Juvenile Acanthosis Nigricans. V. Pardo-Castelló and J. J. Mestre.—p. 788.
*Hydatid Cyst of Gluteal Region. C. Cabrera Calderín.—p. 798.
Moreschi's Operation for Varicose Veins. R. Machín.—p. 802.
*Myeloid Leukemia. A. Recio and F. R. Casas.—p. 805.

Juvenile Acanthosis Nigricans. — Pardo-Castelló and Mestre relate the case of a man, aged 23, who presented symptoms of acanthosis nigricans since he was 3 years old. Evidence of an internal malignant tumor was absent. There was a decreased excitability of the sympathetic system with consequent vagotony, which the authors believe justifies the theory that acanthosis nigricans is of a sympathetic and endocrine nature.

Hydatid Cyst of Gluteal Region.—Cabrera Calderín asserts that the localization of an hydatid cyst in the gluteal region is a very rare occurrence and that his case is the first to be reported in Cuba, and the third in the literature. The patient, aged 25, complained of continuous and intense pain in the left hip, radiating to the thigh. A tumor was found in the left gluteal region, and after two exploratory punctures a diagnosis of hydatid cyst was made. The tumor was incised. A transparent fluid, then pus, was evacuated. Exploration of the cavity with a probe revealed six hydatid cysts. Under proper treatment the patient made a good recovery.

Myeloid Leukemia.—In their study of leukemia, Recio and Casas observed two rare phenomena, which they assert have not previously been reported. The first of these phenomena was observed in an experiment based on the rapid disappearance of foreign elements from an animal's circulation when citrated blood from leukemic patients was injected into it. The experiment showed that the injection of citrated blood (which in mammals does not modify the morphology of the blood) into chickens produces a hyperleukocytosis, greater than that which has been obtained in the experimental study of infections or intoxications. This phenomenon, they believe, suggests that in the blood of leukemic patients there must be some hormone or leukopoietic stimulus which determines the hyperleukocytosis. The second phenomenon is the appearance of myeloblasts. They are very numerous in the first weeks in myeloid leukemia, then diminish, and finally disappear in the final stages of the disease.

Siglo Médico, Madrid

83: 541-568 (April 6) 1929

Social Importance of Postvenereal Sterility in Women. V. Aza.—p. 541.
*Treatment of Chorea Minor by Intravenous Injection of Sodium Salicylate. L. Aydillo.—p. 549.

Treatment of Chorea Minor by Intravenous Injection of Sodium Salicylate.—Aydillo says that the intravenous injection every other day of 10 cc. of a mixture containing 15 Gm. of sodium salicylate, 10 Gm. of pure dextrose and 100 Gm. of distilled and sterilized water yielded good results in six of eight cases of chorea minor studied. The patients improved after the second injection and recovered before twenty injections had been given.

Archiv für Gynäkologie, Berlin

136: 1-212 (March 20) 1929

Technic of Blood Perfusion of Surviving Placenta. H. Küstner and H. Siedentopf.—p. 1.
*Reid Hunt Reaction in Diagnosis of Pregnancy. H. Eufinger, H. Wiesbader and L. Focsaneanu.—p. 12.
Rôle of Iso-Agglutinins, Isohemolysins and Anaphylaxins in Etiology of Toxemia of Pregnancy. F. Isbruch and T. Wohlfeil.—p. 19.
*Hydrogen Ion Concentration of Cerebrospinal Fluid in Eclampsia. G. Schpoljansky and A. Danzig.—p. 37.
Decomposition of Glycogen in Vagina. H. Schultheiss.—p. 48.
Relation Between Bacterial Flora and Hydrogen Ion Concentration of Vagina. H. Schultheiss.—p. 66.
Effect of Bacterial Flora of Vagina on Hydrogen Ion Concentration of Vaginal Secretion in Pregnancy. H. Schultheiss.—p. 94.
Stereoscopic Roentgen Examination of Placentas in Twin Pregnancies. F. Kiffner.—p. 111.
*Etiology of Cephalematoma. H. Naujoks.—p. 122.
Mineral Content of Cysts. A. Schepetinsky and M. Kafitin.—p. 130.
*Involution of Cancer of Uterus Following Roentgen Irradiation. R. Dyroff.—p. 141.
*Hypernephroma Metastases in Vagina. O. Gragert.—p. 167.
*Gangrene of Forearm in the New-Born. W. Fischer.—p. 181.
*Histogenesis of Myomas of Uterus. K. Ulesko-Stroganowa.—p. 189.
Oxidation Disturbances in Carbon Metabolism During Pregnancy. A. Bock.—p. 197.

Application of Reid Hunt Reaction to Diagnosis of Pregnancy.—Eufinger et al. found that the acetonitrile resistance of white mice is definitely increased by treatment of the mice with serum from a pregnant woman. The gradual increase in this positive Reid Hunt reaction becomes more marked as the pregnancy progresses, reaches its highest value during labor, and rapidly returns to normal during the puerperium. Of the patients with toxemia who were examined, those with hyperemesis did not show a deviation from the normal whereas those with eclampsia usually showed abnormally high values. In parallel examinations of the blood of mother and child, a marked difference between the two kinds of blood was noted. The blood of the umbilical cord as a rule showed normal or slightly increased values. The results lead the authors to believe that hyperfunction of the thyroid is present during pregnancy.

Hydrogen Ion Concentration of Cerebrospinal Fluid in Eclampsia.—Schpoljansky and Danzig noted that the hydrogen ion concentration of the cerebrospinal fluid shows marked variations in eclampsia: from a high degree of acidosis to a high degree of alkalosis (from 6.36 to 8.9). Neither the acidosis nor the alkalosis of the cerebrospinal fluid is dependent on the severity of the condition, the number of the attacks or the functional disturbance of the kidneys. Before labor alkalosis is more frequently noted, whereas after labor acidosis is more common. In the second half of pregnancy an acidosis of the blood frequently develops, accompanied by a diminution in the alkali reserve. The higher the alkalosis of the cerebrospinal fluid is, the lower is the alkali reserve of the blood. The alkali reserve of the blood binds first the acidosis of the brain; this may possibly explain a displacement of the cerebrospinal fluid to alkalosis.

Etiology of Cephalematoma.—To determine whether suction alone is sufficient for the production of a cephalematoma, Naujoks subjected an area about 40 mm. in diameter on the scalp of a new-born infant who had just died to mechanical suction. After a few minutes, projection of the scalp at the point of suction was noted. After a half hour the suction cup was removed and the head was cut from the body and frozen. Section of the skull at the point where the suction had been applied revealed that the thickened edematous scalp was raised and that beneath it but separated from the bone by the periosteum, which was firmly adherent, there was a collection of free blood. Convinced that suction alone may produce an epiperiosteal hematoma but not a cephalematoma, the author repeated the experiment with another head. This time he created suction at a point on the right side of the head until a definite projection had developed. Then with a hard, dull object he exerted great pressure and made several rubbing movements on the left side of the head and followed this trauma by the application of the suction cup. A projection of the scalp was produced but it was not as marked as the one on the right side. Examination of the projections revealed a typical epiperiosteal hematoma on the right side and a typical cephalematoma on the left side. The author therefore draws the conclusion that, for the production of a cephalematoma, stasis and suction are of secondary importance; the indispensable factor in the production of this condition is a force acting tangentially on the cranium of the fetus.

Histologic Involution of Cancer of Uterus Following Roentgen Irradiation. — According to Dyroff, histologic changes do not appear in cancer tissue following roentgen irradiation until after a long latent period, which varies according to the size of the irradiation dose and the metabolic activity of the cells at the time of irradiation. The changes consist in degeneration of the cancer cells and proliferation of the mesen-

chymal cells. From six to nine months or even a longer time is required for the histologic disappearance of the cancer following roentgen irradiation.

Hypernephroma Metastases in the Vagina.—Gragert reviews the ten cases of hypernephroma metastases in the vagina reported in the literature and to them adds a case that he observed in a woman, aged 53. Examination of the patient, who gave a history of bloody discharge from the vagina for a period of six months, revealed an ulcerated dark red, pedunculated tumor the size of a hazelnut on the anterior wall of the vagina, slightly to the left and below the external orifice of the urethra. The tumor was excised under local anesthesia; microscopic examination revealed that it was a hypernephroma. Three months later the patient was operated on for an abdominal tumor, and a hypernephroma the size of a man's fist was removed from the upper pole of the left kidney.

Gangrene of Forearm in the New-Born.—Fischer reports a fatal case of gangrene of the forearm in an infant, aged 14 days. At necropsy thrombosis of the right radial, ulnar, brachial and axillary veins and arteries, embolism of the main trunk of the left pulmonary artery, infarction of the left lung, hypostasis in the right lower lobe, cutaneous hemorrhages and hemorrhages from the mucosa of the stomach, a thrombus in the portal vein and general anemia and cachexia were found. The author believes that a mechanical birth injury of the veins or the arteries (or both) of the right arm had led to an ascending thrombosis of the brachial and axillary veins and finally to the formation of a thrombus in the pulmonary artery and that the thrombosis of the brachial artery had led to a retrograde thrombosis of the axillary artery and the aorta.

Histogenesis of Myomas of Uterus.—Ulesko-Stroganowa believes that the genesis of uterine myomas can now be considered definitely established. Genetically they develop from the same cells on which depend both the physiologic growth of the myometrium and its physiologic hyperplasia during menstruation and during pregnancy. These cells comprise muscle tissue already present and embryonal (mesenchymal) rests, principally the adventitial cells in the walls of the blood vessels. One of the chief stimulating bodies concerned in the development of uterine myomas is the ovarian hormone. In the absence of ovarian function (before puberty or in the climacteric) uterine myomas do not develop. The varied histologic pictures in uterine myomas are caused by the various degrees of differentiation of the young muscle cells and of the myoblasts. Malignant myomas develop as the result of an extremely rapid and unsuppressed multiplication of the young muscle cells and of the myoblasts that have lost the power of differentiation.

Archiv für Kinderheilkunde, Stuttgart

86: 241-320 (March 28) 1929

Increase in Toxicosis in Infants. F. Goebel.—p. 241.
Blood-Cerebrospinal Fluid Permeability for Bromine in Infants. F. Kruse. —p. 254.
Phosphate Content of Blood Serum in Toxicosis. F. Kruse and W. Sladczyk.—p. 266.
*Generalized Emphysema in Bronchopneumonia and Whooping Cough. H. Unger.—p. 281.
*Early Diagnosis of Leukemia. Opitz.—p. 293.
*Prophylaxis of Chickenpox. Bäumler.—p. 309.

Generalized Emphysema in Bronchopneumonia and Whooping Cough.—Unger reports a fatal case of bronchopneumonia and whooping cough in an infant, aged 10 months. At necropsy cutaneous emphysema in the right supraclavicular region, bullous emphysema of both lungs, and interstitial emphysema with the formation of large bubbles of air in the connective tissue of the hilum of the lung and of the entire mediastinum were found.

Early Diagnosis of Leukemia.—Opitz points out the difficulty of diagnosing leukemia in the early (subleukemic or aleukemic) stages. The general condition of the patient is not much disturbed, the temperature may be subfebrile, lymphocytosis does not yet dominate the blood picture, myeloid cells are not numerous, and thrombopenia, hemorrhages and necrotic changes in the oral cavity may be absent. The case report at times does not suggest leukemia. The disease may begin acutely like an infectious disease, subacutely with pains in various bones and joints, or insidiously with increasing paleness, weakness and loss of appetite.

Value of von Késmárszky's Method of Immunization Against Chickenpox.—From his experience in the immunization of ninety-nine children, Bäumler states that von Késmárszyky's method of active, intracutaneous immunization against chickenpox is of little value.

Archiv für klinische Chirurgie, Berlin

154: 645-804 (March 9) 1929

*Results of Surgical Treatment of Spinal Cord Tumors. L. Schönbauer. —p. 645.
*Epilepsy: Experimental and Clinical Study. L. Schönbauer.—p. 693.
*Cryptorchidism: Treatment. D. Brunzema.—p. 754.
*Spontaneous Rupture of Subclavian Artery. K. Hanf-Dressler.—p. 785.

Tumors of Spinal Cord.—Of ninety cases in which operation was done on the basis of a diagnosis of tumor, this diagnosis was verified in sixty cases; in twenty-four cases, tumor was not found; in six cases, one was discovered at necropsy. Of the sixty-six verified cases, twenty-six were extradural tumors, thirty-two intradural tumors and nine intramedullary tumors. Thirteen were in the cervical region, forty-two in the dorsal region, and eleven in the lumbar region. In the twenty-four cases in which tumor was not found, a serous meningitis was present. There were twenty deaths in the operative series. Twenty-two of the patients in this group were alive and well more than three years after the operation. The tumors were: tuberculoma, 6 cases, with 2 deaths; endothelioma, neurinoma, psammoma, cysts and fibroma, 23 cases, with 4 deaths; sarcoma, 16 cases, with 7 deaths; glioma, 7 cases, with 2 deaths; carcinoma, 4 tumors, with 4 deaths; angioma, 2 cases, no deaths; granulation tissue, 1 case, no death; tissue not differentiated, 7 cases, with 3 deaths.

Treatment of Epilepsy.—Schönbauer reviews the results of conservative and operative treatment of epilepsy of recorded cases and his own material and reaches the conclusion that there is little cause for satisfaction. Although surgical intervention entails only a very small mortality, the results do not justify even this. Of twenty-three cases of genuine epilepsy, only five were improved. Of forty patients with traumatic epilepsy operated on, eighteen were improved, two died as the result of the operation, seven remained unimproved, seven died sooner or later after the operation (not as a result of it), and seven could not be traced. Of the patients not subjected to operation, that is, twenty-five cases of traumatic epilepsy, four were improved. Of an entire series of eighty-eight patients, only twenty-seven were improved, or 30 per cent. The author states that intensive experimentation to determine the cause of epilepsy is needed, and suggests, on the basis of his experimental results, that the vegetative nervous system plays some rôle. Resection of the sympathetic chain seemed to have a definite influence in lessening the number of convulsions.

Treatment of Cryptorchidism.—After a brief review of the subject and its literature, Brunzema analyzes 102 cases in which operation was performed. The main reasons for seeking relief were: hernia, forty-five cases; absence of testis in scrotum, nineteen cases; pain and discomfort elicited by motion, twenty-nine cases. Only one of these cases was an example of ascent of the testis into the inguinal canal. This followed an attack of gonorrheal epididymitis. In four cases, heredity was traceable. The occupation of the father did not seem to have any rôle in the etiology. Malignant degeneration occurred in two cases. Manual reposition was possible in one case; in one case the cord was of sufficient length not to demand fixation; fixation by Schüller's method was done in eight cases; Kocher's extension method was used in three cases; extension with fixation of the processus vaginalis to the skin of the thigh in twenty-four cases; Gersuny's method in six cases; de Beule's method in forty-nine cases; preperitoneal fixation in four cases, and semicastration in five cases. Brunzema prefers not to operate until after the fifth year, when the danger of infection is considerably lessened, so far as the patient's personal hygiene is concerned. De Beule's method is the operation of choice. When this is not possible, extirpation in unilateral cases and abdominal transplantation in bilateral cases must be considered as methods of choice.

Spontaneous Rupture of Subclavian Artery.—Hanf-Dressler reports the case of a man, aged 22, who was quite devoted to athletics. He had been refused admission to the

police because of hypertrophy of the left ventricle and mitral insufficiency, but this did not deter him from continuing swimming, jumping and boxing. One day he complained of weakness, fatigue, nosebleed and loss of appetite, with palpitation. His physician made a diagnosis of "athlete's heart." A few days later he passed the test for the broad jump, 100 meter dash and 300 meter swim. Returning home from the swimming test, he felt bad and complained much of pains in the right shoulder and right side of the chest. He decided to take a nap, but before going to bed he exercised with the "expander" (chest developer). Suddenly he experienced a very severe pain in the right shoulder and chest and arm. He began to sweat and lost consciousness. On regaining consciousness, he complained of severe pain in the upper right shoulder region, in the stomach, dyspnea and difficult swallowing. He also bled considerably from the nose. Nevertheless, he went out. On the street there was sudden recurrence of all the symptoms with complete loss of consciousness. He was taken to a hospital, where a tentative diagnosis of perforated gastric ulcer was made. After thorough examination this was changed to effusion into the right pleural cavity. The condition of the patient forbade operation. His condition fluctuated between feeling somewhat better to feeling decidedly worse. All his symptoms were aggravated. On the twelfth day of his illness, while in bed, washing his face, he suddenly cried out, became pale, struggled for air, and fell back dead. At the necropsy it was found that the right subclavian artery had ruptured (complete separation) 3 cm. from its origin. The author asserts that no similar case is on record. He reviews the possible causes of the condition and suggests that, if the correct diagnosis had been made, it would have been possible to save the man's life by ligating the subclavian artery, a procedure that has been followed by gangrene of the extremity in only 4.8 per cent of the cases.

Beiträge zur Klinik der Tuberkulose, Berlin

71: 257-384 (Feb. 22) 1929

Pathogenesis of Tuberculosis. A. Schlossmann.—p. 257.
*Death Rate in Infants in Tuberculous Environment. M. Deutsch-Lederer.—p. 259.
*Experimental Results of Local Immunization Against Tuberculosis. K. W. Clauberg.—p. 263.
Production of Tubercles and Tuberculoid Structures by Injection of Lipoids. A. Haim.—p. 269.
*Goldenberg's Simplified Method of Tuberculosis Complement Fixation Reaction with Active Serum. H. Schulte-Tigges.—p. 332.
Spontaneous Tuberculosis in Monkeys. H. H. Kalbfleisch and A. Nohlen.—p. 336.
Spirographic Studies in Therapeutic Collapse of Lung. Anthony and Heine.—p. 362.
"Crossed" Pulmonary Dulness. A. Winkler.—p. 370.
*New Cannula for Direct Thoracoscopy. W. Mascher.—p. 382.

Death Rate in Infants in Tuberculous Environment.—From the study of 305 families in which there were 810 children inclusive of 196 infants and in which at least one member of each family had open tuberculosis with the elimination of tubercle bacilli, Deutsch-Lederer draws the following conclusions: 1. Tuberculosis does not cause the death of infants during the first year of life nearly as frequently as it was formerly thought to do. 2. The decreased death rate in infants in a tuberculous environment following vaccination with B C G is not necessarily due to the vaccination. The death rate in infants exposed to open tuberculosis was just as low without vaccination in Düsseldorf as with vaccination in Paris. 3. The death rate in infants in a tuberculous environment in Düsseldorf was even somewhat lower than the general death rate in infants in that city. This fact is to be explained by the careful supervision of these families.

Local Immunization Against Tuberculosis.—In experiments on guinea-pigs, Clauberg was able to produce local immunity of the lungs to the intrapulmonary injection of virulent tubercle bacilli.

Value of Goldenberg's Simplified Method of Tuberculosis Complement Fixation Reaction with Active Serum.—In a comparative study of the two methods, Schulte-Tigges found that Goldberg's simplified tuberculosis complement fixation reaction gave approximately the same results as Besredka's original reaction.

New Cannula for Direct Thoracoscopy.—According to Mascher, the division of adhesions in the pleural cavity is an operation whose value in the production of a good collapse of the lung in artificial pneumothorax is generally recognized. In spite of this fact, the operation is not as popular as it deserves to be. One of the chief reasons for this is the purely technical difficulties that one encounters in attempting to divide the adhesions with the original Jacobaeus thoracoscope. To eliminate these difficulties the author has devised a direct vision thoracoscope. The advantages of such an instrument are that: 1. One obtains a direct view of the pleural cavity in a sufficiently large, well lighted visual field without the changes in the picture produced by an optical system. 2. The coordination between eye and hand remains normal, and the inspection of the adhesions and the application of the cautery are not difficult. The cautery can even be reapplied to the same part of an adhesion without difficulty. 3. The annoying clouding of the lenses is avoided. 4. The smoke produced by the cauterization is immediately conducted to the outside; with the thoracoscope in common use it is necessary to remove either the instrument or the cautery to permit the smoke to escape. 5. The cannula for direct thoracoscopy can be introduced as a rule on the anterior or the lateral wall of the thorax. Bedridden patients are thus not subjected to the danger of the formation of a fistula from the escape of exudate through a puncture on the posterior wall of the thorax.

Deutsche medizinische Wochenschrift, Berlin

55: 553-602 (April 5) 1929

Normal and Pathologic Character Development. K. Wilmanns.—p. 553. C'td.
Etiology and Treatment of Rheumatic Infections. W. H. Veil.—p. 556. C'tn.
*Diagnosis and Prophylaxis of Whooping Cough. Madsen.—p. 559.
Results of Investigations Concerning Encephalitis. F. Sioli.—p. 560.
Abortive Forms of Disseminated Encephalomyelitis. E. Redlich.—p. 562.
*Treatment of Diphtheria with Large Doses of Serum. V. Bie.—p. 563.
*Contemporaneous Methods of Diphtheria Immunization. W. Pockels.—p. 564.
Relation Between Cardiac and Circulatory Insufficiency. H. Dietlen.—p. 566.
Present Status of Diseases of Myocardium. W. Ceelen.—p. 569.
Cystic Kidney and Cardiac Hypertrophy. T. Fahr.—p. 572.
Diagnosis of Unilateral Nephropathy. H. Eppinger.—p. 573.
Correlation Between Endothelium, Thrombosis and Embolism. B. Fischer-Wasels and J. Tannenberg.—p. 574. C'cn.
Professional Disturbances of Voice. Sokolowsky.—p. 576.
*Treatment of Diabetes Insipidus. M. Nothmann.—p. 579.

Diagnosis and Prophylaxis of Whooping Cough.—Madsen asserts that whenever whooping cough occurs in epidemic form, it causes more fatalities than diphtheria, scarlet fever and measles combined. A bacteriologic method of diagnosis has been perfected in the Serum Institute of Denmark. This method makes it possible to detect the disease in the catarrhal stage. It also proved valuable in detecting atypical cases in adults who had spread the disease among the children. Concerning the prophylaxis, the author states that whooping cough vaccination effected complete immunity only in exceptional cases. However, it was observed that in the patients who had been vaccinated, the disease was much less severe than in unvaccinated patients. Among 2,094 vaccinated patients only six fatalities occurred, while of 627 patients who had not been vaccinated, eighteen died. It was also noted that complications, particularly pneumonia, were comparatively rare among the patients who had been vaccinated. The author points out that vaccination is effective only if it is performed before or in the beginning of the catarrhal stage. In later stages the results are negligible.

Treatment of Diphtheria with Large Doses of Serum.—Bie states that since 1920 he has treated diphtheria with large doses of serum. The serum employed by him was not concentrated. When used for intramuscular injections it contained 700 antitoxin units in each cubic centimeter. For intravenous injections, a serum containing from 800 to 1,600 units in each cubic centimeter was employed. The maximum dose for intravenous injection in adults was 50 cc.; in children 1 cc. for each kilogram of body weight was given. If these quantities did not contain a sufficient number of antitoxin units, the patients were given additional units by intramuscular injections. In light cases 16,000 units was given. For more severe cases from 32,000 to 48,000 units was injected, and in very serious cases the patients received from 80,000 to 100,000 units. The author

gives a statistical report of 1,113 cases which had been treated according to this method during the five months from Sept. 1, 1928, to Feb. 1, 1929. The total mortality among this number was 2.07 per cent. However, if those patients are eliminated who reached the hospital in an almost moribund condition and died during the first twenty-four hours, the mortality was only 1.62 per cent.

Contemporaneous Methods of Diphtheria Immunization.—Pockels points out that a negative Schick test does not always indicate actual immunity. The small amounts of toxin which are injected in the Schick test can be neutralized by comparatively small amounts of antitoxin. It is therefore not always certain whether the antitoxin content of the blood, in case of a negative Schick test, is quantitatively sufficient. The author discusses various methods of immunization against diphtheria. He states that the most commonly applied methods are those that cause the least local or general reaction. Such methods have been preferred, in order not to prejudice public opinion against vaccination. However, such methods of immunization do not always produce the necessary amount of antitoxin units, and among the children who were immunized according to them there occurred severe cases of diphtheria. The author states that he is not able to designate a certain method of immunization as the best. He points out, however, that the methods of vaccination that are now commonly employed do not meet all the requirements.

Treatment of Diabetes Insipidus.—Nothmann states that hypophysis preparations have proved valuable in the treatment of diabetes insipidus. The extract is administered endonasally in the form of snuff powders. The author demonstrates the effectiveness of this method in one case of which he gives a graphic representation. The extract is given three times daily. Each dose represents from 0.025 to 0.030 Gm. of hypophysis extract. The author concludes that by this form of medication the treatment of diabetes insipidus is essentially facilitated.

Deutsche Zeitschrift für Chirurgie, Leipzig

215: 147-350 (March) 1929

*Results of Ligation of Splenic Artery. Von Stubenrauch.—p. 147.
*Interrelation of Thymus and Thyroid. Gebele.—p. 186.
Osteoplastic Exposure of Ankle Joint. F. König.—p. 196.
Arthrodesis of Talocalcaneal Joint for Clubfoot. K. Port.—p. 208.
*Surgical Correction of Prognathism. G. Schmidt.—p. 212.
Id. I. Wymer.—p. 226.
Extra-Oral Splinting After Resection of Middle Portion of Lower Jaw. E. Stahnke.—p. 234.
Late Results of Missile Fracture of Femur During World War. R. Bestelmeyer.—p. 240.
*Gas Edema Infection. J. Fessler.—p. 248.
Tumors of Hypophysis and Neighboring Tissues (Intrasellar and Suprasellar: Olfactory Groove, and of Hypothalamus). F. Rupp.—p. 266.
*Injuries of Spinal Cord in World War. Hugel.—p. 295.
*Denervation of Female Breast. M. Ernst.—p. 302.
*End-Results of Periarterial Sympathectomy. Raess.—p. 309.
Treatment of Pericranial Sinus. A. Krecke.—p. 318.
Stab Wound of Heart Followed by Gas Bacillus Infection in Thorax. H. von Seemen.—p. 321.
Results of Surgical Treatment of Aneurysms of Femoral Artery Caused by Missiles. A. Angerer.—p. 326.
Surgical Treatment of Large Aneurysms: Hook for Closure of Artery by Pressure. R. Grashey.—p. 331.
*Conservative Treatment of Perforated Gastric Ulcer Probably Caused by Roentgen Examination: Jejunostomy. F. Colmers.—p. 333.
*Intestinal Obstruction Caused by Food. A. Krecke.—p. 336.
Rupture of Intestine Due to Violent Contraction of Abdominal Muscles. —p. Lunckenhein.—p. 339.
Nephrectomy for Polycystic Degeneration of Kidney. F. Schlagintweit. —p. 340.
*Large Tumor (Fibrolipoma) of Fatty Capsule of Kidney. J. Duschl.—p. 343.
Splint for Fractures of Leg (Devised by Matt-Deubner). W. Deubner. —p. 345.

Results of Ligation of Splenic Artery.—Von Stubenrauch reports a case of thrombopenia in which he ligated the splenic artery. The patient died four years later from a recurrence of the bleeding. The author is not convinced that ligation of this artery yields results comparable with those following splenectomy, but he deems the procedure one worth considering. A newly developing collateral circulation supplies the spleen after ligation of its artery.

Interrelation of Thymus and Thyroid.—Animal experimentation has convinced Gebele that the actions of the thymus and of the thyroid are entirely antagonistic; hence thymectomy in exophthalmic goiter is not justified.

Surgical Correction of Prognathism.—Schmidt describes a procedure which was adopted, with successful results, in seven cases. Briefly, it consists of a transverse division of the ramus of the inferior maxilla just below the temperomandibular notch and a sliding backward of the distal segment of the maxilla.

Gas Edema Infection.—Fessler says that he never saw any of these cases in the Boer War or in the Greco-Turk War because these wars were fought on dry sandy or stony ground, with the troops constantly on the move, and artillery fire wounds were rare. In fact, the western front during the World War furnished most of the cases seen. He reviews the clinical history of these cases and discusses the treatment. He warns that all war wounds should be treated with an eye to the possible development of gas infection, gangrene, edema and the like.

Injuries of Spinal Cord in War.—Hugel compares the injuries of the spinal cord in war and in peace times and emphasizes that in order to obtain like results in the two types of cases, the treatment used will differ somewhat. He deems operation indicated even in the most serious cases so long as the transverse paralysis is not complete and the paralysis is greater on the side where the missile entered than on the other side.

Denervation of Female Breast.—Ernst asserts that it is possible to effect a shrinking of the breast by resection of the sympathetic nerve or division of the intercostal nerve, as shown by experiments performed by him and by clinical cases.

End-Results of Periarterial Sympathectomy.—Raess analyzes the end-results in twenty-three cases of periarterial sympathectomy divided as follows: ten cases of varicose ulcer; six cases of trophic ulcer due to a variety of causes; two cases of crural ulcer caused by arteriosclerosis; four cases of ulcer of scars, and one case of hemicrania. In this group there were twelve cures and eleven failures from three to six years after the operation. The best results were obtained in the varicose ulcer cases, six cures. The author warns against jumping to conclusions regarding the value of this operation. He has seen recurrences five and a half years after the operation; hence it is not correct to speak of end-results ten months after operation, as is so often done.

Roentgenoscopy Causes Perforation of Stomach Ulcer.—Colmers reports a case of gastric ulcer in which roentgen examination aided in making the diagnosis. The patient was aged 68. Fifty-seven hours after this examination symptoms of perforation supervened, but because of the age of the patient and the fact that the ulcer was situated high and covered by the pancreas and the liver, operation was deferred until the fifth day, when a jejunostomy was performed. The author is of the opinion that the roentgen examination had something to do with the perforation of the ulcer. Of course, it is the ingested barium meal and not the roentgen ray itself that is responsible. The author warns against using force when palpating the stomach during a fluoroscopy, and giving too large a barium meal in any case. He is convinced that the life of his patient was conserved by postponing the operation, but stresses the fact that such an outcome cannot be expected in all cases; hence decisions as to procedure must be adapted to each individual case.

Intestinal Obstruction Caused by Food.—Five years before Krecke saw this patient, she had been operated on for intestinal obstruction caused by a stenosis of the small bowel, the result of a constriction by an adhesion arising from an old pyosalpinx. The adhesion was divided and an entero-anastomosis was performed. The patient remained entirely well for five years. Following the ingestion of a meal containing mushrooms, the patient suddenly manifested symptoms which led to a diagnosis of appendicitis. Operation was advised. The abdomen contained a considerable amount of serous fluid. The appendix was free and apparently normal. However, it was removed. Further examination disclosed the fact that proximal to the anastomosis performed five years previously was a large soft mass which more than filled the intestine and had become firmly wedged against the anastomotic opening. Incision of the bowel showed that the mass consisted of mushrooms. As it lay only about 15 cm. from the ileocecal opening, it was decided to milk it into the large bowel and close the small incision,

thus avoiding the performance of a more radical procedure. The effort proved successful. The author cautions that before making a diagnosis of appendicitis in any case, it is well to think of and exclude occlusion of the bowel by food.

Tumor of Fatty Capsule of Kidney.—In this case Duschl operated under a tentative diagnosis of tumor of the ovary or retroperitoneal sarcoma, but found instead an enormous tumor of the fatty capsule of the right kidney which surrounded the ureter. The tumor was removed and the kidney sutured into its bed. The mass weighed 23 pounds (10.4 Kg.) and proved to be a fibrolipoma with multiple foci of necrosis. The patient made a good recovery.

Klinische Wochenschrift, Berlin

8: 673-720 (April 9) 1929

Colloidal Chemistry of Proteins. W. Pauli.—p. 673.
*Icterus Catarrhalis and Naunyn's "Cholangie." H. Eppinger.—p. 679.
*Feeding of Patients with Gastric Ulcer by Means of Permanent Jejunal Catheter. P. Morawitz and N. Henning.—p. 681.
*Harmful Effects of Overdosage of Irradiated Ergosterol. P. György.—p. 684.
Anemia in Bartonella Infections in Rats. C. Schilling and H. Neumann.—p. 691.
*Brown Pigmentation of Heart and Cardiac Insufficiency. T. Fahr.—p. 693.
*Scarlet Fever Sepsis. A. Chassel.—p. 694.
Experimental Researches on Regulation of Sugar Content of Blood. B. Kisch.—p. 695.
Intoxication Theory of Pernicious Anemia. F. Meyran and R. Nothhaas.—p. 697.

Icterus Catarrhalis and Naunyn's "Cholangie."—Eppinger states that icterus catarrhalis is generally due to parenchymatous changes in the liver, and not, as it was formerly assumed, to an inflammation of the duodenal papilla. His statement is based on four postmortem examinations and on observations that he made in three other cases. Naunyn defines "cholangie" as a morbid process of the biliary passages. However, it is not an inflammatory process and it is therefore to be differentiated from cholangeitis. Umber, in taking up the ideas of Naunyn, considered icterus catarrhalis and "cholangie" as practically identical. The author states, however, that "cholangie" occurs comparatively seldom, and that the syndrome that is generally diagnosed as icterus catarrhalis is perhaps not a disease entity but rather, in most cases, a parenchymatous disease of the liver, and in rare instances a "cholangie." He also points out that icterus does not always occur simultaneously with "cholangie." He observed one case of "cholangie" without icteric symptoms.

Feeding of Patients with Gastric Ulcer by Means of Permanent Jejunal Catheter.—In treating sixty-three cases of gastric and duodenal ulcers, Morawitz and Henning fed their patients by means of a permanent jejunal catheter. This catheter, consisting of a thin, soft, elastic tube, is introduced through the nose and reaches into the jejunum. The food consists of butter, milk, eggs, cane sugar, flour and fruit juices. The amount should be about 40 calories daily for each kilogram of body weight. The mixture should be passed through a fine sieve. It should be of body temperature and given slowly in quantities of 100 cc. The patients should also receive some water several times a day. This treatment has to be continued for from three to six weeks. Concerning the results of this treatment, the authors state that it was successful in all cases. The pains generally disappeared shortly after the beginning of the treatment. Among the patients were nine with unusually large ulcers. Only five of the sixty-three patients suffered a relapse. Contraindications to this treatment are pyloric stenosis and acute bleeding ulcers.

Harmful Effects of Overdosage of Irradiated Ergosterol.—György asserts that the quantities of irradiated ergosterol used have generally been too large. The therapeutic maximum dose for an infant or small child should be 1 mg. daily. In cases of tetanus and rickets the dose may be increased temporarily to 2 mg. For prophylactic purposes from 0.1 to 0.5 mg. a day is sufficient. The harmful effects of irradiated ergosterol are usually due to overdosage. They become manifest in disturbances in the lime metabolism. The first characteristic symptoms of intoxication are: lack of appetite, vomiting and loss of weight. The author points out that, in order to prevent overdosage, it is necessary that the preparations containing irradiated ergosterol be standardized.

Brown Pigmentation of Heart and Cardiac Insufficiency.—Fahr points out that brown pigmentation of the heart is generally considered a symptom of a disturbance in the metabolism, and it usually occurs either in old age or simultaneously with diseases such as carcinoma and tuberculosis. It has so far never been considered a disease entity or the only cause of a cardiac insufficiency. The author reports two cases in which the brown pigmentation seemed to be the only cause of a suddenly appearing cardiac insufficiency. He assumes that the pigmentation was caused by disturbances in the metabolism. However, the nature of this disorder could not be determined. His object in reporting these cases was to direct attention to this unusual observation.

Scarlet Fever Sepsis.—Chassel reports that among 694 patients with scarlet fever, eighteen developed scarlet fever sepsis. The diagnosis was made on the basis of the clinical symptoms and following detection of hemolytic streptococci in the blood. In eleven cases the sepsis began in the early stage of the disease, whereas in seven instances it developed later. The focus of infection was in the ear in eleven cases; twice it was found in the tonsils; once in the endocardium, and in one case it could not be localized. In three women, the puerperal uterus was found to be the source of the sepsis. These patients died. In the children the focus of infection was nearly always the ear. The author points out that in cases of scarlet fever sepsis, the prognosis is not as unfavorable as other reports in the literature indicate. Of eighteen patients, eleven recovered. Concerning the therapy she states that, even in cases that appear hopeless, surgical or otologic-surgical treatment should be given. The general condition of the patient should be strengthened and particular care should be taken to support the heart and circulation.

Medizinische Klinik, Berlin

25: 541-584 (April 5) 1929

*Circulatory Weakness in Infectious Diseases. T. Brugsch and W. Grunke.—p. 541.
*Surgical Treatment of Exophthalmic Goiter. A. W. Meyer.—p. 543.
Plurisympathetic Regulatory Disturbances. E. Leschke.—p. 547.
Diagnosis and Treatment of Epidemic Meningitis. F. Kulbs.—p. 549.
Diphtheria Immunization with T. A. F. (Toxin-Antitoxin Floccules). H. Opitz and W. Bayer.—p. 551.
Diet Kitchens in Hospitals. C. von Noorden.—p. 552.
Diagnosis and Treatment of Articular Rheumatism. A. Slauck.—p. 552.
Diseases of Bones. H. Coenen.—p. 554. C'td.
Influence of Parabiosis on Internal Secretions. E. Fels.—p. 557.
Experiments with Cardiac Hormone Preparations. L. Haberlandt.—p. 560.
Researches on Direct and Indirect Bilirubin. O. Weltmann and H. Hückel.—p. 560.
Emergency Treatment in Internal Medicine: Acute Poisoning. W. David.—p. 561. C'td.
Influence of Salicylic Acid on Senile and Other Tremors. L. Rosenbund.—p. 563.

Circulatory Weakness in Infectious Diseases.—Brugsch and Grunke state that in infectious diseases, circulatory weakness is frequently the cause of death. However, these circulatory disturbances are not always of the same character. The authors observed that in diphtheria, influenza and erysipelas, death was generally due to primary cardiac insufficiency. In typhoid and scarlet fever it was caused by cerebral toxic collapse, and capillary paralysis was often noticed during enteritis, peritonitis or allergic shock. The symptoms by which these various disturbances may be recognized are also described. The treatment will be discussed in a later article.

Surgical Treatment of Exophthalmic Goiter.—Meyer treated thirty patients with exophthalmic goiter. The surgical method employed by him was first introduced by Plummer and Boothby. For about eight or ten days before the operation the patients are given from 10 to 30 drops of compound solution of iodine three times daily. During these days most of the symptoms decrease markedly. The gastro-intestinal disturbances disappear, the pulse rate becomes more normal, the exophthalmus diminishes, the increased basal metabolism is lowered and the goiter becomes smaller and harder. During this remission operation should be performed. In order to improve the cardiac activity of the patient, the author advises medication with digitalis two to three days before the operation. The best anesthesia is tribromethanol narcosis in combination

with local infiltrations and paravertebral anesthesia. In some instances tribromethanol alone is sufficient. In patients with cyanosis, venesection is helpful. Care should be taken that the patient receives a sufficient supply of fluid. Diuretics should likewise be given, and compound solution of iodine should be administered for several days after the operation. This method of surgical treatment is indicated particularly in cases of acute exophthalmic goiter. Concerning the results of this therapy, the author states that of the thirty patients who were treated in this manner, two died of double pneumonia from three to four days after the operation. However, they did not show the typical symptoms which are otherwise generally observed in patients with exophthalmic goiter. All other patients recovered and are able to work. The author explains the physiologic changes which occur in the organism during the treatment with compound solution of iodine. He calls special attention to the fact that after this treatment, the operation cannot be postponed; otherwise the patient is liable to suffer serious complications. This therapy should therefore never be started unless the patient as well as the physician has reached a definite decision concerning the operation.

Münchener medizinische Wochenschrift, Munich

76: 655-694 (April 19) 1929

Prognosis of Acute Nephritis. A. Gros.—p. 655.
*Effectiveness of Citochol Reaction for Diagnosis of Syphilis. H. Kliewe and W. Engelhardt.—p. 657.
Diagnosis and Treatment of Syphilitic Aortitis. E. Morgenstern.—p. 659.
"Toxic" Changes in Leukocytes. Arneth.—p. 660.
*Danger of Poisoning and Idiosyncrasy in Administration of Oil of Chenopodium. A. Biesin.—p. 661.
*New Symptom of Chronic Appendicitis. B. Chatzkelson.—p. 664.
Researches on Catalytic Properties of Mud Baths at Kissingen. Salzmann.—p. 664.
Chronic, Allergic, Animal Protein Toxicosis a Possible Cause of High Blood Pressure: Treatment Based on This Theory. Bienstock.—p. 665.
*Mass Poisoning with Arsenic. G. Liebermeister.—p. 668.
Uselessness of Diapositives for Roentgen Diagnosis of Pulmonary Tuberculosis. A. Viethen.—p. 669.
Present Status of Scarlet Fever. H. Schottmüller.—p. 670. C'en.
Fifty Years of Hygienic Institute at University of Munich. K. Kisskalt.—p. 675.

Effectiveness of Citochol Reaction for Diagnosis of Syphilis.—Kliewe and Engelhardt direct attention to the citochol reaction, which was first applied by Sachs and Witebsky. It is called the citochol reaction in contradistinction to the Sachs-Georgi or lentochol reaction. The lentochol reaction requires a comparatively long time but the citochol reaction can be completed in about thirty minutes. A concentrated cholesterolized extract of beef heart is used for this test. To investigate the effectiveness of the citochol reaction the authors employed it in 1,000 cases. As control they employed the Wassermann reaction, the Sachs-Georgi reaction, and the Meinicke turbidity reaction. In comparing the results of these tests, they found that in 880 cases the four reactions gave identical results. The remaining 120 cases were more thoroughly investigated by the authors, and shortcomings in the various methods were detected. They come to the conclusion that the citochol reaction is more sensitive than the three control tests. In specificity it is about as valuable as the Wassermann reaction and the Sachs-Georgi reaction, whereas it is even superior to the Meinicke turbidity reaction. The citochol reaction is therefore a valuable addition to the serore:ctions for the diagnosis of syphilis.

Danger of Poisoning and Idiosyncrasy in Administration of Oil of Chenopodium.—Biesin points out that, since the war, oil of chenopodium has been more commonly applied as an anthelmintic than the older santonin preparations. Cases of poisoning, which have been observed from time to time following the administration of oil of chenopodium, should serve as a warning to exercise great care in the administration of this medicament. In reviewing the cases that are reported in the literature, the author found that poisoning is generally due to overdosage. According to many authorities 3 cc., or from 60 to 70 drops, is the maximum dose. The author states, however, that the patient should never receive more than from 24 to 30 drops, which is equal to from 1 to 1.2 cc. In the administration of oil of chenopodium, the following rules should be considered: 1. The anthelmintic treatment should be postponed in those cases in which the child is in a weakened condition or suffering from another disease. 2. The treatment should be given only if the presence of the intestinal parasites has been actually demonstrated. 3. No other medicament should be given during this treatment. 4. Care should be taken that the preparation is absolutely pure. 5. Overdosage should be avoided. 6. Following the last daily dose, a laxative should always be given. In strict compliance with these rules, the author treated several thousand patients. Three times daily the children were given a certain number of drops of the oil, according to their ages. Twelve drops was the maximum amount given. As a laxative the children received castor oil. The treatment was never continued for more than three days, and the interval between the treatments was at least from two to four weeks. However, in spite of the great care that had been exercised, the author observed three cases of poisoning. He points out that in exceptional cases the poisoning may be due to idiosyncrasy in the patient. He concludes that as long as the administration of oil of chenopodium involves such dangers it is advisable to employ the older and less dangerous santonin preparations.

New Symptom of Chronic Appendicitis.—In observing numerous patients with chronic appendicitis, Chatzkelson noticed their peculiar "cautious" walk. On closer investigation of this symptom he found that the skin and the subcutaneous fatty tissues in the right hypogastric region were much thinner than on the left side. In order to detect this the patient must be in a horizontal position while the examiner forms a fold of skin on the right as well as on the left side. In comparing the two, the difference may be noticed. The author assumes that this atrophy of the skin and of the subcutaneous fatty tissues probably extends to the muscular portions of the abdominal wall. As a possible explanation for this symptom he gives the following: In cases of chronic appendicitis the region of the right hypogastrium is in a constant state of protective rigidity; it does not take part in the respiration, and, as a result of the muscular contraction, the blood vessels likewise cannot function properly. These conditions gradually lead to atrophy.

Mass Poisoning with Arsenic.—Liebermeister reports on fifty factory workers who were brought to the hospital with symptoms of acute poisoning. It was assumed that the water which had been used to make coffee had been contaminated. The patients vomited and the mucous membranes of the pharyngeal cavity appeared reddish. It was not possible to determine immediately the exact nature of the poison. By means of irrigation the stomach of each patient was emptied. Following this they were given milk with chalk powder. Those who continued to vomit were given repeated irrigations. Most patients complained of severe headaches. Sensations of pressure in the epigastric region or disturbances in the internal organs, however, were not observed. Examination of the urine showed abnormalities in twenty-one cases. Most of these again showed normal conditions on the following day. The majority of the fifty patients could be dismissed after three days. Only a few had to be kept under observation for several days longer. Serious complications or fatalities did not occur. Chemical examination of the water and of the vomit revealed large quantities of arsenic. In 100 cc. of water that had been used to make the coffee, 0.346 Gm. of arsenic was detected. The surprising fact that such large quantities of poison did not cause serious complications or fatalities is explained by the author as being due to the circumstance that the poison was ingested in a dissolved form. In poisoning with solid arsenic the irrigation often does not remove the poison completely, because small fragments of arsenic are retained in the folds of the stomach.

Wiener klinische Wochenschrift, Vienna

42: 457-504 (April 11) 1929

Pathogenesis and Treatment of Cancer. J. Hochenegg.—p. 463.
Wounds and Infection. A. Fraenkel.—p. 467.
*Casuistics of Chronic Inflammatory Tumors of Abdominal Wall. E. Ranzi.—p. 472.
*Blocking of Phrenic Nerve in Differential Diagnosis of Acute Abdominal and Pulmonary Diseases. W. Denk.—p. 473.
Theodor Billroth's Position with Regard to Pathologic Physiology of Goiter. B. Breitner.—p. 475.
*Ideal Cholecystotomy. A. Brenner.—p. 476.
Mechanical Cholecystitis Caused by Malformation of Gallbladder. K. Büdinger.—p. 477.

*Results of Surgical Treatment of Interstitial Hernia. R. Demel.—p. 481.
Psychophysical Treatment of Vaginismus. L. G. Dittel.—p. 484.
Effectiveness of Narcosis with Nitrous Oxide. E. Domanig.—p. 485.
Pathologic Secretion of Sweat. S. Erdheim.—p. 487.
Development of Operation for Myoma. J. Fabricius.—p. 489.
Surgical Treatment of Obstipation. W. Goldschmidt.—p. 495.
Adenoma of Thyroid Gland with Metastasis in Bones. H. Hinterstoisser.—p. 496.
Relation Between Heterospecific Pregnancy and Eclampsia. O. Hoche.—p. 498.
Peptic Jejunal Ulcer Perforating into Abdominal Cavity. E. Just.—p. 500.
Cardiac Disturbances in Senile Hyperthyroidism: Their Surgical Treatment. F. Kaspar.—p. 502.

Casuistics of Chronic Inflammatory Tumors of Abdominal Wall.—Ranzi calls attention to inflammatory tumors of the abdominal wall, which generally develop after operations. He mentions several authors who have reported cases of this condition, and he gives a detailed report of one case observed personally. A woman, aged 51, complained of bladder trouble. Five years before she had undergone an operation for hernia. The pain increased constantly, and since the examination revealed a tumor an operation was performed. The tumor had spread to the roof of the bladder. The extirpated tumor was about the size of a walnut and contained several areas of necrosis. The histologic examination showed granulation tissue. The recovery of the patient was uneventful. In comparing this case with those reported in the literature, it appears remarkable, because the tumor not only involved the abdominal wall but spread to the bladder. The author states that in most instances of inflammatory tumors of the abdominal wall, simple incision should be the method of choice. However, if internal organs are affected, or if a malignant tumor is likely to develop, extirpation is necessary.

Blocking of Phrenic Nerve in Differential Diagnosis of Acute Abdominal and Pulmonary Diseases.—It is pointed out by Denk that the differential diagnosis of acute diseases in the upper part of the abdomen and of pathologic conditions in the lower lobes of the lungs is often difficult. From the study of the innervation of the diaphragm, he reasoned that by blocking the phrenic nerve in the neck, the abdominal symptoms would disappear, if the pathologic condition was limited to the pleural cavity. In seven doubtful cases he employed the following method. From 10 to 20 cc. of a 0.5 per cent solution of procaine hydrochloride was injected into the anterior scalene muscle. This injection interrupts the conduction of the descending branch of the phrenic nerve. In six instances the diagnosis was made clear by this method. In four cases the pains in the upper abdominal cavity disappeared following the blocking of the phrenicus, and the patients remained free from abdominal symptoms after that. However, in two instances, the pains did not disappear, and these patients actually suffered from abdominal diseases.

Ideal Cholecystotomy.—Brenner gives a short summary of several methods for the surgical treatment of gallstones. He states that cholecystectomy is at present the operation most commonly performed. This is due to the fact, as most authorities assume, that the gallbladder has only negligible biologic significance, and that if the organ is not removed, it will cause new complications. The author, however, is of the opinion that the gallbladder should be preserved as much as possible. He therefore advises early cholecystotomy, in order to remove the stones and prevent gallstone colic and inflammation. He states that an early operation is less difficult for the patient as well as for the surgeon. He gives a detailed description of the operation which he performed successfully on twelve patients. This ideal cholecystotomy should be performed in the beginning stage of gallstone troubles.

Results of Surgical Treatment of Interstitial Hernia.—Demel reviews 158 cases of interstitial hernia, in which surgical treatment was given in the Eiselsberg clinic. In twenty-eight cases the hernia was spontaneous, whereas in 130 instances it occurred following an operation. According to the location of the hernia on the right or left side, and in the epigastric, hypogastric or suprapubic region, different surgical methods were employed. The author evaluates the methods of Girard-Mayo, Lucas-Championnière, Gersuny, Brenner and Karewsky. He also reports the results of the operations in which they were employed.

Zentralblatt für Chirurgie, Leipzig

56: 769-832 (March 30) 1929

Treatment of Coma Hepaticum, Caused by Injury of Liver Parenchyma in Course of Cholelithiasis. G. E. Konjetzny.—p. 770.
Gas Peritonitis: Animal Experiments on Action of Anaerobes on Peritoneum. W. Löhr.—p. 774.
*Experiences with Plication Tamponade in Gastric and Duodenal Ulcer. O. Roth.—p. 779.
Tamponade, Drainage and Exclusion of Danger Zone in Operations on Stomach. M. Friedemann.—p. 782.
*Volvulus of Cecum Without Intestinal Obstruction. M. Makkas.—p. 786.
Operations for Renal Calculus. M. Zondek.—p. 789.
Administration of Compound Solution of Iodine in Cases of Exophthalmic Goiter as Preparation for Operation Done in Several Stages. F. Peyser.—p. 793.

Plication Tamponade in Gastric and Duodenal Ulcer.—This method was first described by Roth several years ago. Now he reviews his results in 100 cases that could be traced in which operation was performed during the years from 1919 to 1925. Seventy-four patients reported that they were entirely well; nineteen report good results; six had to be operated on again later, and one died four years after the operation from bleeding of a jejunal ulcer. Thirty-five patients were examined with the roentgen ray. Ninenteen showed a tight pylorus; in sixteen there was some leakage. In not one of these 100 cases was there any evidence of the development of carcinoma on an ulcer base.

Volvulus of Cecum.—In the case cited by Makkas, the volvulus was limited entirely to the cecum without any involvement of the ileum or that portion of the colon above the ileocecal valve; hence there was no occlusion of the intestine. The symptoms suggested appendicitis of a somewhat atypical nature. The patient was three months pregnant, so operation was deferred until eighteen hours after the first attack of severe pain in the appendix region. The cecum was found down in the Douglas pouch behind the uterus, slightly adherent but easily removable. The twist was to the left for 180 degrees. The bowel was empty, as was the appendix, slightly bluish and distinctly edematous. When the cecum was untwisted, it measured 10 cm. in length. The appendix was apparently normal, but was nevertheless removed. Recovery was uneventful.

56: 833-896 (April 6) 1929

*How Can the Operative Mortality of Exophthalmic Goiter be Lowered and End-Results Improved? E. Payr.—p. 834.
*Motor Activity of Resected Stomach. M. Kirschner.—p. 844.
Local Anesthesia for Suprapubic Prostatectomy. A. Läwen.—p. 847.
*Intrahepatic Icterus: Its Treatment. P. Frangenheim.—p. 854.
Mesenteric Pyemia and Liver Abscess Following Appendicitis, Cured by Operation. J. Hohlbaum.—p. 859.
*Osteitis Fibrosa. H. Kästner.—p. 862.
*Laminectomy for Racemose Angioma of Spinal Cord: Death Later from Aneurysm of a Cerebral Artery, Caused by a Fungus. A. Kortzeborn.—p. 868.
Cyst of Mesentery and Wandering Kidney. A. Ladwig.—p. 877.
Roentgen Diagnosis of Urinary Calculi. W. Baensch.—p. 879.
*Experimental Resection of Liver and Spleen by Means of Diathermy. H. Kuntzen and W. Vogel.—p. 882.
Fatal Cachexia Without Specific Organic Disease and Without Characteristic Changes of Structure in Glands of Internal Secretion. E. Heller.—p. 885.
Positiveness of Diagnosis by Palpation of Liver Metastases. A. W. Fischer.—p. 889.

Treatment of Exophthalmic Goiter.—Payr stresses the importance of preliminary treatment, agreeing with others as to the nature of this treatment and, in the main, as to the subsequent surgical intervention. He still believes in the efficacy of quinine hydrobromide, 0.2 to 0.25 Gm., twice daily, as a means of easing the heart action. It is given by mouth unless there is a tendency to intractable vomiting, when it should be injected intravenously. However, the author warns against intravenous medication in these cases because of the trauma entailed thereby. As to the preliminary use of iodine, he admits that it may have value; he has seen good come from it but is not wholly convinced as to the necessity for using it. He has discarded preliminary roentgen irradiation because it may lead to necrosis and it reaches parts that it is desired to leave untouched. Roentgen treatment is favored for cases that are inoperable for one reason or another, as a postoperative treatment and for recurrences of symptoms after operation. Ligation of both superior thyroid arteries, as against more radical inter-

vention, is the method of choice in all cases presenting gastrointestinal disturbances, tachycardia and arrhythmia, myocarditis, great loss of weight (more than 25 per cent), much nervousness, and more than 50 per cent increase in the metabolic rate. Even mild and moderately severe cases which do not yield to preparatory treatment are treated by ligation. Payr warns never to attempt ligation of the four thyroid arteries in one sitting. Resection of the thyroid is done from six to ten weeks after the preliminary ligation, as indicated by the condition of the patient, which must be determined carefully. Payr feels that in this way the operative mortality in this disease may be lowered.

Motor Activity of Resected Stomach.—Because the motor activity of the resected stomach is greatly reduced immediately after the operation and because the patient is in need of food to strengthen his resisting power, Kirschner advises giving such patients much fluid and food as soon as possible after operation, because the fate of the patient is decided in the first few days after operation. At first there is delay in the emptying time of the stomach, but giving plenty of water and food will help to overcome this temporary blockade of the stomach besides strengthening the patient and thus increasing his chances of making a good recovery.

Surgical Treatment of Intrahepatic Icterus.—Frangenheim asserts that operation should be done in every case of intrahepatic icterus whose course is progressive (drainage of the hepatic duct or the production of an artificial gallbladder fistula by anastomosing the gallbladder or the common duct with the stomach or intestine). Ten of the eleven patients operated on by the author have been cured.

Osteitis Fibrosa.—Kästner relates a case of osteitis fibrosa of the humerus, with cystic development, in which trauma appears to have been implicated in the etiology. The disease developed at the site of three fractures sustained one and two years previously. The diseased portion of bone was resected; a transplant from the tibia was inserted, and excellent restoration of bone was reported four months later. Roentgenograms showed the not inconsiderable part the periosteum played in the regeneration of the bone.

Angioma Racemosum of Spinal Cord.—The first and only symptom for a long time in Kortzeborn's case was a tendency to fall down without any apparent cause. Then the patient, a woman, aged 51, complained severely of fatigue and weakness. The muscles of her back seemed to have shortened, but she did not have any pain. Then she had difficulty in standing; disturbances of sensation in the legs appeared, and finally severe pain in the legs on walking, boring in character and affecting the posterior surface from the gluteal region to the toes. There was urinary incontinence; diarrhea and constipation alternated. As the weakness in the legs increased, the pain diminished. The myelogram showed some obstruction from the ninth dorsal to the first lumbar vertebra. A laminectomy was done and a typical angioma racemosum, extending from the tenth dorsal to the first lumbar vertebra was found, mostly on the right side. The husband of the patient insisted that something be done with the hope of improving her condition. Therefore, the angioma was carefully resected. The wound healed promptly, and the condition of the patient improved considerably in the course of the next three or four weeks. Then she suddenly complained of severe headache. Five weeks later she became unconscious, apparently because of cerebral apoplexy. Three days later she died. At the necropsy a chronic mycotic meningitis and arteritis at the base of the brain was found and along the posterior communicating artery was a mass of aspergillus, surrounded by much granulation tissue containing giant cells. This tissue had broken through the wall of the vessel and had caused the hemorrhage from which the patient died.

Resection of Liver and Spleen by Diathermy.—Kuntzen and Vogel demonstrated experimentally that by means of surgical diathermy one can easily and safely resect large portions of the liver and spleen of animals without primary hemorrhage and without fear of hemorrhage later. They suggest that the method may have human application in cases of rupture of the liver, abscess of the liver and resection of the liver. The authors have made use of diathermy to control hemorrhage in one case of deep seated liver abscess and in a series of cases of brain tumor. They recommend the method highly.

Zentralblatt für innere Medizin, Leipzig

50: 305-336 (April 6) 1929

*Acute Anterior Poliomyelitis in Adults. W. Bahr.—p. 306.

Acute Anterior Poliomyelitis in Adults.—Bahr reports two typical cases of acute anterior poliomyelitis in a girl, aged 19, and a man, aged 61.

50: 337-392 (April 13) 1929

*Treatment of Nephrosis with Liver Extract. L. Rohácek.—p. 337.
Asthma as a Psychotherapeutic Problem. J. H. Schultz.—p. 344.
*Treatment of Pneumonia with Type Specific Serum. A. Hartwich.—p. 361.
Determination of Amount of Glomerulus Filtrate by Means of Creatinine as Kidney Function Test. P. Brandt-Rehberg.—p. 367.

Treatment of Nephrosis with Liver Extract.—Rohácek reports a case of nephrosis in which the administration of liver extract was followed by a definite increase in the diuresis and in the excretion of sodium chloride.

Treatment of Pneumonia with Type Specific Serum.—Hartwich points out that at present the treatment of pneumonia with type specific serum is possible only in large hospitals with a bacteriologic laboratory. He believes that the preparation of a polyvalent serum would render the serum treatment of pneumonia by the general practitioner as popular as the serum treatment of scarlet fever.

Nederlandsch Tijdschrift voor Geneeskunde, Haarlem

73: 1793-1900 (April 13) 1929

Possible Diagnoses in Acute Abdominal Symptoms. W. F. Suermondt.—p. 1795.
Cerebral Localization as Presented by Modern Psychiatry. C. Winkler.—p. 1808.
*Use of Pituitary Preparations in Obstetrics. W. P. Plate.—p. 1823.
*Significance of Encephalitis Preceding Onset of Weakmindedness. A. Querido.—p. 1837.
Dermatitis Exfoliativa Neonatorum. C. Goedhart.—p. 1842.

Use of Pituitary Preparations in Obstetrics.—Plate concludes that pituitary preparations are useful in obstetrics. He advocates their use especially in weak labor pains and in hemorrhage following expulsion of the placenta.

Significance of Encephalitis Preceding Onset of Weakmindedness.—Through Querido's study of 756 cases, he reaches the conclusion that the percentage of normal persons and weakminded persons who have been affected by encephalitis is practically the same; hence it follows that encephalitis has very little bearing on the onset of weakmindedness. It is possible, however, that encephalitis has great significance for the development of the clinical manifestations of weakmindedness. Querido's researches lead him to believe that the causation of weakmindedness must be sought almost exclusively in endogenous factors.

Hygiea, Stockholm

91: 209-272 (March 31) 1929

*Question of Blood Transfusion: Summarized Report on 221 Cases. S. Johansson.—p. 209.
Observation on Measles Epidemic in Boys on Training Ships. P. Butler.—p. 239.
Observations on T Deflection in Electrocardiogram. H. Bjerlöw.—p. 257.

Question of Blood Transfusion: Summarized Report on 221 Cases.—Johansson's material comprises 313 transfusions performed from 1925 to 1927. The results were favorable in 71 per cent of twenty-eight cases of bleeding gastric and duodenal ulcer and in 44 per cent of forty-six cases of extensive operative intervention in weakened patients; in eleven cases of marked anemia in the second group the results were satisfactory in ten. In cholemia and sepsis the results were quite good in view of the gravity of the cases. In massive bleeding due to accidents, good results may be expected unless grave complications are present. The author's investigations on the risks in blood transfusions in cases of satisfactory preliminary serologic tests showed one instance out of the 313 transfusions in which the blood transfusion may have contributed to the fatal outcome and three instances of temporary injury, two of brief duration and one continuing for some time.